

**CURRICULUM IMPLEMENTATION FOR LEARNERS WITH SPECIAL
EDUCATION NEEDS: THE CASE OF SELECTED INCLUSIVE AND SPECIAL
SCHOOLS IN ZAMBIA**

by

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DECLARATION

I declare that, “CURRICULUM IMPLEMENTATION FOR LEARNERS WITH SPECIAL EDUCATION NEEDS: THE CASE OF SELECTED INCLUSIVE AND SPECIAL SCHOOLS IN ZAMBIA“, is my own work and all the sources used that are not my own works have been acknowledged.



DATE: 30/11/2017

DEDICATION

This work is dedicated to my mother, Nyakakoma Sombo Sarah Chiseta, my beginning and my present and to my late Father, Vumango Chipoya Muzata, gone but I always cherish your visits in my dreams that give me hope that you are still alive to see what achievements I make day in day out. We will never disappoint you, Dad, even in your death!

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ABSTRACT

A curriculum is a mirror reflecting the identity, goals, aims and objectives of any nation. The kind of graduates a country has are a reflection of the type of curriculum and the success of any curriculum depends on the involvement of those who implement it. Teachers in particular are the ‘engine’ of curriculum success but can also be the architects of its downfall. Zambia launched the 2013 curriculum framework in January 2014. However, with a worldwide historical trend of discrimination against disability and to some extent against teachers of learners with disabilities, it was imperative to undertake this study to establish how the 2013 revised curriculum was being implemented in teaching Learners with Special Educational Needs in Zambia. Without knowledge of whether special education teachers were involved in the curriculum process or not, it was further imperative to study their involvement in the curriculum development process and its implementation.

This study sampled one hundred and twenty (120) special education teachers, twelve (12) Education Standards Officers and two (2) Curriculum Specialists for special education. Questionnaires, interviews, checklists and teacher observations were used to collect data. Questionnaires were administered to special education teachers to collect data of their knowledge about and involvement in curriculum development process, the methods and strategies and the challenges they faced implementing the curriculum. Interviews were administered on Education Standards Officers and Curriculum Specialists for special education to establish their role the curriculum development process, their appreciation of the curriculum change, the challenges they and the teachers faced implementing the curriculum and how they helped to overcome the challenges. By using the observation checklist during lesson observation and post lesson discussions, the researcher managed to collect data about the actual experiences in natural settings – the classroom.

The study employed the Convergent Parallel Mixed Methods Design. Quantitative data was analysed by use of the Statistical Package for Social Sciences (SPSS) to derive statistical interpretations such as frequencies, percentages, standard deviation, mean, significant differences and relationships. Qualitative data was analysed with the help of NVIVO qualitative data software to create themes by coding density and basic cross tabulations by node attribute values. Results were triangulated to come up with a consolidated conclusion. It was established that special education teachers were not involved in the CDP except at

implementation and they were implementing the revised curriculum amidst numerous challenges. Lack of involvement in the curriculum development process was linked to special education teachers' lack of understanding of key concepts necessary for curriculum implementation for LSENs.

The study recommends a deliberative cycle of training of special education teachers in the revised curriculum as it relates to special education. The study further calls for the provision of necessary specialised and adapted materials for effective implementation of the revised curriculum.

Key words: Curriculum, curriculum change, special education teachers, curriculum implementation, special needs, inclusive, special school, teacher involvement, curriculum development process, adapted curriculum.

ACRONYMS AND ABBREVIATIONS

ADL	Activities for Daily Living
AEAA	Association for Educational Assessment in Africa
AfriMAP	Africa Governance Monitoring and Advocacy Project
AIDS	Acquired Immuno-Deficiency Syndrome
ANU	Australian National University
AT	Assistive Technology
CDC	Curriculum Development Centre
CDP	Curriculum Development Process
CS	Curriculum Specialist
CSEns	Children with Special Education Needs
DEBS	District Education Board Secretary
DK	David Kaunda
DPO	Peoples Disability Organisations
DRC	District Resource Coordinators
ECC	Early Childhood Curriculum
ECZ	Examinations Council of Zambia
ESO	Education Standard Officer
GRZ	Government of the Republic Zambia
HCI	Human Computer Interaction
HI	Hearing Impaired
His	Hearing Impairments
HIV	Human Immuno-Deficiency Virus
IBE	International Bureau of Education
IC	Intellectually Challenged
ICT	Information Communication Technologies
IEA	Individualised Education Activities
IEP	Individualised Educational Programme/Plan
ISSN	International Standard Serial Number
JAWS	Job Access to Windows
JETERAPS	Journal of Emerging Trends in Educational Research and Policy Studies
LSE	Life Skills Education

LSENs	Learners with Special Educational Needs
LUCOTEHA	Lusaka College for Teachers of the Handicapped
MESVTEE	Ministry of Education, Science Vocational Training and Early Education
MoE	Ministry of Education
MoGE	Ministry of General Education
N.P.	No pagination
NCF	New Curriculum Framework
NVIVO	Qualitative Data Analysis Software for QRS International
OBE	Outcomes Based Education
OECD	Organisation for Economic Cooperation and Development
OWL	One Way Link
PC	Physically challenged
PEO	Provincial Education Officer
PESO	Provincial Education Standards Officer
PISA	Programme for International Student Assessment
PLWSENs	Parents of Learners with Special Needs
RNCS	Revised National Curriculum Statement
Sa	Sine anno (without year)
SE	Special Education
SEN	Special Educational Needs
SESO	Senior Education Standards Officer
SETs	Special Education Teachers
SPSS	Statistical Package for Social Sciences
TR	Teacher
UDL	Universal Design Learning
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNISA	University of South Africa
UNZA	University of Zambia
UPE	Universal Primary Education
VI/s	Visually impaired or visual impairments
WL	Weaker link

ZAJLIS	Zambia Journal of Library and Information Science
ZAMISE	Zambia Institute of Special Education
ZAOU	Zambia Open University
ZATEC	Zambia Teacher Education Course
ZCEA	Zambia Civic Education Association
ZEC	Zambia Episcopal Conference

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CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 BACKGROUND TO THE STUDY

Quality education and education that supports children with disabilities cannot be realised in the absence of a curriculum that is inclusive, and that takes care of the needs of learners with disabilities. According to UNESCO-IBE (2013), education is the gateway to full participation in society and it is particularly important for children with disabilities, who are often excluded. Malungo (2013:1) claims that “education is critical in the enhancement of knowledge and skills to foster individual, family, community and national development”. The Ministry of Education Science, Vocational Training and Early Education (MESVTEE 2013a) and the Ministry of Education (MoE 1996) observe the need for equity and equality in the provision of education for all citizens. However, most curricula reforms in Zambia seem to have focused more on general education, omitting or paying little attention to the special education (SE) or the educational needs of Learners with Special Educational Needs (LSENs). In 2013, Zambia rolled out a new curriculum but what is not known is how teachers for special education (SETs) are implementing such a curriculum in the absence of clear implementation guidelines, support documents and resources for implementation. The extent to which SETs participated in the development process of the current curriculum has also not been established.

Today, curricula reforms should not ignore SE issues and, in particular, the democratic view of an inclusive curriculum. Without an inclusive curriculum, a curriculum in which the needs of children and or learners with disabilities are encapsulated, education provision is mere rhetoric. Two of the strategies in the new curriculum framework to promote equality of access and participation of disadvantaged groups by the education system are to employ strategies to support children at risk, including those with SE needs, orphans and vulnerable children, and to eliminate sources of educational disadvantages in order to enhance equity (MESVTEE 2013a).

1.2 HISTORICAL BACKGROUND

A historical background about SE in Zambia provides us with a synoptic view of the nature of education and a sketchy picture of the curriculum offered to LSENs since pre-colonial times. Zambia has a long history of SE stemming from 1905 when the missionaries pioneered

the teaching of apprenticeship skills and the gospel to the visually impaired (VI) and hearing impaired (HI) at Magwero in Eastern Province. Mrs Hofmeyr started a class of the VI learners in 1905 and after her death in 1910, Miss Anna Bote started a class for 12 blind learners at Madzimoyo. Another class was opened at Nyanje in 1930. Learners that managed to finish Standard 4 were trained as teachers of gospel. By 1963, boys who passed Standard 6 were trained as teachers, telephone operators or as evangelists. The syllabus mainly focused on life skills such as making baskets, brooms and mats. However, teacher education was a challenge. The teacher for these learners was a volunteer whose interest was to preach the gospel (Snelson 1974). Snelson (1974), Kelly (1999) and Mwanakatwe (2013) observe that missions and their volunteers' interest in establishing schools in Northern Rhodesia and the whole of Africa was to bring Christianity through evangelisation. The categories of people understood to have disabilities then were the VI and the HI although this changed over time. By 1977, when Zambia introduced the first education reforms, SE was understood to be for the VI, HI, physically challenged and the intellectually challenged learners, but progress has been slow since then.

Although Zambia has not reached the pinnacle of understanding disabilities and has no adequate legislation, the country can boast of having a Disability Act 2012, policy documents and the current curriculum frameworks, that recognise learners with hearing, visual, intellectual, physical, learning problems as having SE needs. Though the key documents are not consistent in terms of the categories of disabilities recognised, the curriculum framework of 2013 recognises gifted/talented learners as needing SE attention as well (MESVTEE 2013a). As of 2013, Zambia had 107 271 and 878 LSENs at basic and secondary school levels respectively (MESVTEE 2013b). In the same year, records at the Ministry of General Education showed 461 teachers who had certificates in SE, 168 who had degree certificates in SE and 1 128 had diploma certificates in SE (MESVTEE 2013b). These figures show a ratio of 1:62 teachers to learners. A teacher-pupil ratio as wide as this casts serious doubts on the quality of education provided to LSENs in the country.

All LSENs, regardless of the nature and severity of their disabilities, require quality education and a clearly-defined curriculum that addresses their needs. In recognition of such a progressive principle, the MoE (1996) recognises equality of education provision for all children regardless of race, disability, religion, gender or any form of discrimination. It further recognises that the MoE would provide equal access to education opportunities, quality education and adequate monitoring and supervision of SE throughout the country. Be

that as it may, quality education realisation is a complex phenomenon comprising several components which include quality teachers to deliver the required content and skills, quality teaching and learning materials, quality infrastructure, and reasonable pupil-teacher ratios, among other factors such as conditions of service for teachers as motivational additions. A clearly-defined curriculum would add value to delivery of quality education for LSENs.

At policy level and following the then President Kenneth Kaunda's decree in 1972 to shift SE from the Ministry of Labour and Social Services to MoE and the subsequent opening of a teacher training college for teachers of LSENs at Lusaka College of the Handicapped (LUCOTEHA) now Zambia Institute of Special Education (ZAMISE), SE in Zambia was recognised in the 1977 Education Reforms when positive discrimination in favour of LSENs was pronounced. The first Education Act of 1966 was silent on SE. In the 1977 Education Reforms, inter-ministerial cooperation was emphasised in the provision of services for LSENs (MoE 1977). Focus of the 1977 Reforms and Recommendations policy was on assessment, designing curricula and teaching materials, prescribing building specifications and providing professional supervision for LSENs. By 1977, 82 teachers for LSENs had graduated (MoE, 1977). However, despite this progressive landmark in policy and its good intentions, the 1986 structure of the new school curriculum did not include SE.

Moving with international shifts in the provision of SE such as the Salamanca pronouncements, Zambia through its Focus on Learning Education Policy document in 1992 emphasised the provision of education for the disabled through inclusive schooling. The 1996 education policy document 'Educating our Future', also gave clear direction for the provision of education opportunities to LSENs. The key statements contained in the policy are that the MoE would provide equal opportunities to education for learners with disabilities, provide quality education materials and human resources, monitoring, management and supervision of SE (MoE 1996). In the year 2000, the MoE introduced the 'The Basic School Curriculum Framework' developed by Curriculum Development Centre (CDC). Despite not being comprehensive, the 2000 curriculum framework had a short section on SEN explaining the differences by nature that learners have and encouraging the need for identification of LSENs through Inclusive Education Programme (MoE 2000). One very important statement in the 2000 Basic Education curriculum framework relating to SEN was that "it is also the responsibility of each and every teacher to adapt the teaching methods in order to suit pupils' strengths and weaknesses" (MoE 2000: 25). According to the Government of the Republic of Zambia, (GRZ 2012), the Education Act of 2012 provides power to the Minister of Education

to ensure that educational institutions provide LSENs with quality education in appropriately designed and well-resourced educational institutions, staffed by qualified and dedicated teachers, and that the LSENs in both inclusive and SE institutions should be monitored and evaluated through the strengthening of the management and supervision system at all levels of the educational system.

Further notable efforts have been recorded at teacher training level. Initiatives such as training of teachers for SE by the University of Zambia (UNZA), The Zambia Institute of SE (ZAMISE) and the introduction of an integrated teacher education curriculum were included in the recently phased-out Zambia Teacher Education Course (ZATEC) curriculum.

However, despite the many policy documents and pronouncements on SE and inclusion of children with disabilities in education, before the introduction of the 2013 revised curriculum, teaching and learning for LSENs went on without any real attention to the curriculum. The school curriculum was largely designed for the mainstream learners and teachers were encouraged to adapt it to the needs of LSENs. Without documented guidance for adaptation of the curriculum for LSENs, it is doubtful that all LSENs throughout the country received equal or equitable attention and quality education.

The introduction of the 2013 curriculum framework gives hope for a comprehensive curriculum that gives direction on how LSENs can learn and be taught. The Ministry of General Education (MoGE) has CDC as one of its directorates. This centre is mandated by law to oversee curriculum design, development, implementation and evaluation. After serious reflection on the curriculum that guided education before 1996, the CDC observed that the old curriculum was too overloaded, theoretical, examination-oriented and inflexible. Further, the old curriculum was not career-oriented, overlooked skills and values, used a foreign language as the medium of instruction, and had a fragmentation of subjects with similar content. It was observed that part of the content was not relevant to individual and societal needs, lacked the latest technological aspects such as ICT and did not accommodate cross-cutting issues that were affecting the community. This background, based on the Educating our Future 1996 Education Policy document, prompted technocrats to conduct a baseline survey to determine the need for curriculum change (MESVTEE 2013a, Tuchili & Kalirani 2014). In 2005, the baseline survey was conducted, which informed the need for change of the curriculum. In 2009, a curriculum symposium was held, followed by a national curriculum Indaba, activities which lead to the designing of a pilot curriculum which today is

a revised curriculum under implementation. The 2013 revised curriculum comes with major changes in which the notable ones are that there would be early childhood education, instruction through a familiar local language at Grades 1-4, a two-career pathway system of academic and vocational subjects and an integrated subject arrangement (MESVTEE 2013a; Tuchili & Kalirani 2014). The new curriculum which was implemented in 2014 introduced entrepreneurship, life skills, computer studies, early childhood education and the teaching of literacy in local languages from Grades 1-4.

With particular reference to SE, according to MESVTEE (2013a), the revised curriculum has made a number of adjustments guiding the education of LSENs, as follows:

- The categories of SEN include the hearing, visually, physically, intellectually impaired as well as the gifted/talented learners.
- Children with SE needs will require an adapted curriculum and adapted technology.
- Learners with severe disabilities and the intellectually impaired, who cannot benefit from the inclusive curriculum will have an alternative curriculum to suit their needs.
- Sign language and braille have been introduced for LSENs to promote literacy and language competences at primary school level.
- All student teachers should be exposed to adequate knowledge and skills in Sign Language and braille.
- All teacher training institutions will provide specialised training in different categories of SE and colleges of education will offer basic training in SE to students.

But questions arise. It was not known whether SETs were involved in the curriculum development process (CDP) and whether they were adequately prepared to implement the revised curriculum. Further, while the general curriculum is two-pronged, promoting both academic and vocational skills, it does not specifically outline what skills LSENs would learn. For instance, even though the learning areas for the intellectually impaired have been listed (MESVTEE 2013a:31), teachers are left to wonder about the content and the availability of the related technology to be used to teach these learners. The curriculum emphasises adaptation to teach LSENs but it is not known whether SETs have been trained to adapt the curriculum, a very important aspect for curriculum implementation for LSENs. This means SETs need to have full understanding of the general curriculum for them to be able to adapt and implement it to the level of LSENs. In the absence of such training, each teacher may have their own way of adapting it and choosing what and what not to adapt. This leaves

gaps for investigation as to how teachers are implementing the 2013 revised curriculum. How are SETs adapting the curriculum to teach LSENs? Is there an adapted and alternative curriculum derived from the general curriculum teachers are using to teach LSENs in inclusive and special schools? These are but some of the questions requiring investigation of the quality of education provided to LSENs.

In Zambia, there is no curriculum for LSENs per se. All learners regardless of their abilities learn from the same curriculum, with a responsibility on specialist teachers to use their skills to tailor what they teach to the abilities of LSEN. The MESVTEE rolled out a revised curriculum in 2013. This study was conducted to establish how SETs were implementing the 2013 revised curriculum amidst observations of limitations in the general curriculum implementation. The study endeavoured to establish the extent to which SETs, as key stakeholders, were involved in the CDP, the strategies they employed to implement the curriculum and challenges they faced during implementation process.

1.3 MOTIVATION FOR THE STUDY

The motivation for this study was triggered by reflections of my past education while at primary and junior secondary school in Chavuma in 1990, in North Western Province of Zambia. I failed to answer a question involving the diagram of a radio and requiring me to label its parts and give its functions. I could not relate to the question because I did not have adequate exposure to the concept of a radio. My teacher never at any time showed us what a radio and its parts were like. But other learners who had exposure to the radio found it easier to answer such a question, thereby having an advantage over me. The whole nation wrote the same examination but we had different contexts. In rural areas, I remember most of my learning was rote learning, I learned through memorising what I was taught. What bothers me to date is, “if learners without disabilities have difficulties benefiting from same curriculum because of different contexts, how much more would LSENs from different contexts be disadvantaged?” Curriculum is central in education. The way I learned and the manner in which teachers taught my peers and I was characterised with challenges that needed answers. Through my education since then, I have discovered that answers to the problems facing society and education specifically lie in the curriculum and its support systems. Our education system today and in future needs a highly consultative curriculum and resources to implement what we want the curriculum to realise.

Over the years of my teaching experience, I have observed changes in the curriculum at school and teacher training levels. At times, I have questioned especially the haphazard curriculum changes in teacher education between the late 1990s and the early 2000s. Kalimaposo (2010) equally acknowledges this fact, and the fact that lecturers were never consulted on the frequent curriculum changes in teacher education in Zambia. If lecturers were not consulted, where does it leave the learner? Most changes in the curriculum have been top-down, starting from top hierarchy and imposed on the lower levels to implement. Musonda (1999) condemned the curriculum changes engineered by donor agencies which could not be sustained after they left. Currently, issues of SE and inclusiveness have gained support in society. In line with the teaching profession, advocacy plays a big role in promoting an inclusive society and indeed an inclusive curriculum. LSENs are the main motivation for me to carry out this study. I would like to be seen to contribute toward the building of an inclusive society and inclusive schools, not only in theory but in practice. An inclusive curriculum is the engine for achieving an inclusive society.

1.4 STATEMENT OF THE PROBLEM

Zambia launched the revised curriculum in January 2014 for implementation in schools. The revised curriculum focused on incorporating social, economic and technological developments. According to MESVTEE (2013a), the revised curriculum introduced two career pathways at secondary school level involving academic and vocational skills and reviewed the language of instruction in early education and lower grades. Both MESVTEE (2013a) and Tuchili and Kalirani (2014) acknowledge that the revised curriculum integrated some subjects according to their relationships in terms of competences and content learning areas to overcome overload and fragmentation. The revised curriculum incorporated major national cross-cutting themes in the curriculum, introduced foreign languages as subjects in secondary schools, and implemented teaching through local language from grades 1-4. During the launch of the new curriculum, the then Minister responsible for education said the revised school curriculum would empower learners by putting theory into practice (Lusaka Times 2014a). Chishimba (2016) observed that the 2013 published education curriculum framework which contained two career pathways at secondary school level, would allow learners make progress according to their abilities and interests in order to contribute to Zambia's development and economy.

However, some stakeholders raised fears on the 2013 revised curriculum. For example, the *Zambian Eye* (2014) published the Zambia Episcopal Conference views against the introduction of local languages as languages of instruction at lower primary school grades stating that it was against human rights and that it would disadvantage learners who were not native speakers of the language of instruction. Chishiba & Manchishi (2016: 58) argue that the 2013 curriculum on language of instruction was brilliant in principle and not in practice;

“Zambia is a highly urbanized country and it is not possible for all the children living in a multi-lingual urban area to speak the dominant language. In addition, there is still lack of training among existing teachers to enable them handle the new situation”.

Lusaka Times (2014b) also captured complaints from some learners and teachers in Livingstone that the revised curriculum was difficult to implement because some teachers could not speak the local language spoken in that area and some learners were not native speakers of the local language (Tonga) being used in that area. Mudenda & Siwilanji (2017), Kafata (2016) also noted that despite the advantages of teaching in local languages, there were more serious challenges implementing the local language of instruction thereby impacting the quality of teaching and learning. Muzata (2017b), revealed that some teachers found difficulties in using the local language of instruction in teaching, which affected their performance and that of learners. Munsaka & Kalinde (2017) describe the language policy contained in the 2013 curriculum framework as unfair in that it subjects many dialects to learning in only the seven selected local languages.

Such apprehensions raise one major question for curriculum: “were stakeholders involved in the process of curriculum change?” Further questions then arise for study: What about the vulnerable learners in society? How well represented are LSENs in the 2013 revised curriculum? Since the 2013 revised curriculum was rolled out into schools, it is not yet known how inclusive and special schools were implementing it to LSENs. The 2013 curriculum framework recognises the Hearing Impaired (HI), Visually Impaired (VI), physically impaired, intellectually challenged and gifted/talented as categories of LSEN that need an adapted curriculum and adapted technology.

A further observation is that “learners with intellectual impairments as well as others with severe disabilities who cannot benefit from the inclusive curriculum will have an alternative curriculum that suits their needs and abilities” (MESVTEE 2013:21). The document further states that transcription of printed materials in braille would be an important ingredient for

effective learning for learners who are VI just like sign language for the HI learners. SE in the revised curriculum is regarded as cross cutting issue, an issue of national concern. Questions emanate on the effectiveness of the revised curriculum in meeting the learning needs of LSENs in inclusive and special schools. The curriculum framework does not provide guidelines on curriculum adaptation to teachers for SE and there is no alternative curriculum in place for the intellectually challenged or the severe cases as referred to by the MESVETEE. This means everything is left to the SE teachers to adapt the curriculum to meet the needs of LSENs in inclusive and special schools. It is therefore important for this study to establish how SETs were implementing the general curriculum to meet the needs of LSENs in special and inclusive schools in Zambia. The assumptions were that:

- (i) SETs were not involved in the CDP and hence faced numerous challenges implementing the revised curriculum when teaching LSENs.
- (ii) SETs were not trained on how to implement the curriculum and could be facing challenges understanding the key strategies for implementing the curriculum.
- (iii) There were significant differences between types of schools, qualifications, specialisation and the manner in which the revised curriculum was being implemented thereby affecting effective implementation of the curriculum.
- (iv) There were no materials for implementing the revised curriculum.

1.5 RESEARCH QUESTIONS

1.5.1 Main Research Question

The main question that guided the study is, “How are teachers in special and inclusive schools implementing the curriculum for LSENs?”

1.5.1.1 Sub-questions

- To what extent were teachers for SE involved in CDP?
- How are SETs implementing the 2013 revised curriculum to meet the learning needs for LSENs?
- What challenges are SETs facing in implementing the 2013 revised curriculum to the needs of LSENs?
- What methods and strategies SETs were being used to implement the curriculum to meet the learning needs of LSENs?

1.6 AIMS OF THE STUDY

The main/general purpose of this study was to establish how teachers were implementing the 2013 revised curriculum in order to meet the learning needs of LSENs in Zambia's special and inclusive schools. The following objectives guided the study;

- To assess the extent to which SETs were involved in the CDP in Zambia.
- To establish how SETs were implementing the the 2013 revised curriculum to meet the learning needs for LSENs.
- To provide a contextualised analysis of the challenges faced by SETs in the implementation of the 2013 revised curriculum to LSENs.
- To establish the methods and strategies SETs were being used to adapt the curriculum in order to meet the learning needs of LSENs.

1.7 SIGNIFICANCE OF THE STUDY

This study is significant in many ways. Curriculum implementation is dependent on several factors, one of which is its consultative nature. The success of any curriculum lies in the extent of involvement of those who have to implement it and other essential stakeholders who are directly or indirectly involved in the welfare of learners. For this study in particular, the involvement of SETs as specialised professionals in the field of SE is crucial to effective implementation of the curriculum. Tabulawa (2013) acknowledges teachers and even students' role in curriculum as agents that should be given an opportunity to say something about curriculum within their contexts. This study is significant at various levels of CDP. Currently and particularly in Zambia, the MoGE has established structures for SE at all levels of the education system. Thus, there is SE representation at MoGE headquarters at national level, provincial level and district levels. The study will help inform policy makers and curriculum designers on the need for consultation and involvement during CDP. It will further help curriculum technocrats to realise the need for wider consultation and the need to tap into the expert knowledge and skills of SE teachers during CDP. For a long time, SE has struggled to establish itself and has been overlooked, with little or no thought being given to what might be needed in terms of support. For instance, in many cases in Zambia, SE funding has been found to be erratic. Kayuka (2014) in a study of funding of SE units in primary schools in Zambia found that funding was very poor.

Currently, nations are embracing the principle of inclusiveness for the respect of humanity, the provision of equal opportunities to services and according persons with disabilities access to education. This study evaluates inclusiveness in practice as against theory. Curriculum is an engine of any nation. It reflects people's values, beliefs, morals and attitudes. This becomes significant because it may inform the system and stakeholders on the need for inclusiveness in both theory alone and practice. Carl (2012:xi) supports teacher empowerment in curriculum development emphasising that:

curriculum is not something done to teachers but through them and with them, implying that teachers must be involved in curriculum development and they should have the appropriate skills and knowledge to be able to make a contribution to curriculum development.

Carl (2012) observes that empowering teachers with knowledge and skills about the curriculum brings about increased teacher job performance and productivity, improved teacher morale, increased knowledge of subject matter and pedagogy and higher learner motivation and achievement.

The implementation of the curriculum is a crucial stage in the whole process. Teachers need to have knowledge of what they have to implement. They also need accept the change. Without adequate knowledge of curriculum change, teachers find it very difficult to implement what is imposed on them. Without the necessary support materials for the implementation of the curriculum, the quality of learning by learners is compromised. The study will investigate the degree to which SETs are supported to implement curriculum to LSENs in Zambia. Teachers have been acknowledged as key stakeholders in curriculum change. Thus, supporting teachers in making the change possible is crucial to the achievement of curriculum goals and objectives. This study will unveil the nature and extent of support rendered for curriculum implementation and this may help provide an avenue for improvement.

It is expected that from this study, teachers who are mandated to adapt the curriculum would receive pedagogical support to train them to acquire skills on how best they can do this to meet the needs for LSENs. This in turn would help improve the quality of education delivery to LSENs in the country.

1.8 THEORETICAL FRAMEWORK

This study was guided by the Deliberative Curriculum Theory of Kridel (2010:204) who observed that:

curriculum development has a component that deals with issues of implementation and deliberation. Good implementation requires the main agents of the curriculum to be in general agreement with the normative tasks at hand and to have resources, time and the insight to complete their work while also understanding that their work is rooted in an ongoing evaluative effort to improve the school experience.

Group deliberation is the emphasis in curriculum development. In this arrangement, participants in the operation of the school are involved in ongoing discussion and debate about what needs to be done. In this particular case, curriculum would not be viewed as a technocratic process because then it would act as a manual of instructions written by agents outside the school community and the educational situation. There are advantages to curriculum development that is developed on through stakeholder consultation. Where debate prevails, curriculum is necessarily kept connected to the peculiarities of the local situation. Furthermore, the curriculum benefits from multiple perspectives of people with expertise and experience and buy-in of the stakeholders.

1.9 RESEARCH METHODOLOGY

In our endeavour to understand truth, various methods have been proposed. Many think that something is only true when it can be proved through scientific means (positivism). However, further reflections in the area of research have revealed that truth can still be investigated from an interpretative perspective (Murkheji & Albon 2015). Positivism is more related to quantitative research in which the use of experiments is preeminent, demanding a more coherent and systematic means of data collection leading to logical conclusions. Interpretivism is more related to qualitative research in which it is believed that once people themselves describe their contexts, truth is attained.

However, this study employed a mixed-methods approach which uses both positivist and interpretivist approaches. Murkheji and Albon (2015) cited Aubrey et al (2000) arguing that quantitative and qualitative research methods should not be viewed in opposition with each other. Keeves (1997), Denzin and Lincoln (2008) and Sidhu (2014) all observe that the difference between qualitative and quantitative research is not easily definable. These

scholars maintain that the difference lies in the level of abstraction. Qualitative research can still collect numbers that can be described.

This study used quantitative and qualitative methods in collecting and analysing its data. Numbers that were collected were compared with what respondents said. In other words, methodological triangulation helped enrich the study by simultaneously collecting data using different approaches. The use of triangulation counteracts the weaknesses in one method by the strengths in the other. For instance, figures can be described, thereby providing detail and contextual meaning. This approach serves a major advantage as observed by Lodico, Spaulding and Voegtler (2006:282) who indicate that one of the major advantages of collecting both qualitative and quantitative data is that “it combines the strengths of both qualitative and quantitative research, providing both an in-depth look at the context, processes and interactions and precise measurement of attitudes and outcomes”.

Thus, the study collected data from a total sample of 134 respondents made up of 120 Special Education Teachers (SETs) by using a survey, while 12 Education Standard Officers (ESOs) and two curriculum specialists (CSs) were interviewed and 12 teachers were observed. For quantitative research, Murkheji and Albon (2015) suggest that a sample from which conclusions should be drawn by quantitative means should be at least 100 though they acknowledge that there is no clear-cut guideline on the numbers making up a sample. Cohen, Manion and Morrison (2005:93) say “a sample of thirty is held by many to be the minimum number of cases if researchers plan to use some form of statistical analysis on their data”. SETs were randomly selected while CSs and ESOs were purposively sampled. From a general level, all respondents were purposively sampled by virtue of their specialisation in SE. Chapter 4 discusses the research paradigm, approach, designs and methods used to collect data in detail. The sampling and its procedures, the data collection tools, procedures and techniques are also elucidated in this chapter. This chapter further explains how data collected from the field was analysed, the ethical considerations employed and the credibility of the analysed data.

1.10 DELIMITATION OF THE STUDY

There are ten provinces in Zambia. The special schools are dotted around the country and required the researcher to extensively travel to satisfy the demands of the survey component of the study. The study was carried out in selected special and inclusive schools of three provinces namely Southern, Lusaka, and North Western Provinces. The original plan was to

conduct the study in four provinces but after a review of the original sample distributions, the researcher realised it was going to present some challenges in analysis. A change was therefore made to eliminate one province and increase the sample in the third province in order to have an equal number of respondents to reduce errors especially in quantitative analysis. For ethical reasons, the pseudonyms for the schools and districts where respondents were drawn have been used. In Southern province, the researcher visited two special schools namely Southern Province Special School 1 (SPSS1) in Southern Province District (SPD1) and Southern Province Special School (SPSS2) in Southern Province District (SPD2). SPSS1 School is a residential school that houses learners with different disabilities from around the country. The school has a long history of SE provision in Zambia and had the needed respondents for the study. SPSS2 School is found in SPD2. The school houses LSENs and had specialised staff worth taking part in this nature of the study. Four other inclusive schools were selected, two from each district. The pseudonyms for these schools were Southern Province Inclusive School (SPIS1), SPIS2, SPIS3 and SPIS4.

In North Western Province, the researcher collected data from six of the 10 districts. Schools in North Western Province are widely spaced and few SETs are found in each district. Hence, the researcher had to stretch to capture the needed number of respondents from many districts compared to the other provinces. Inclusive education is mainly at special unit level. For the reliability of the data for this study to be ensured, a spread of respondents from different contexts was important. In Lusaka, the researcher collected data from Lusaka Province Special School (LPSS1), a secondary school where LSENs with different disabilities are taught in sections according to their disabilities; LPSS2, a primary school with a combination of LSENs learning in the same classes under one teacher; and LPSS3, a primary school teaching learners with intellectual challenges. Two inclusive schools, Lusaka Province Inclusive School (LPIS1, LPIS2) were also visited.

While there are many other schools in other provinces such as Northern, Eastern, Muchinga, Central and Copper Belt Provinces, this study restricted itself to the sampled provinces and districts due to operational and methodological reasons. Figure 1.1 shows the Zambian map showing the provinces where the study was conducted:

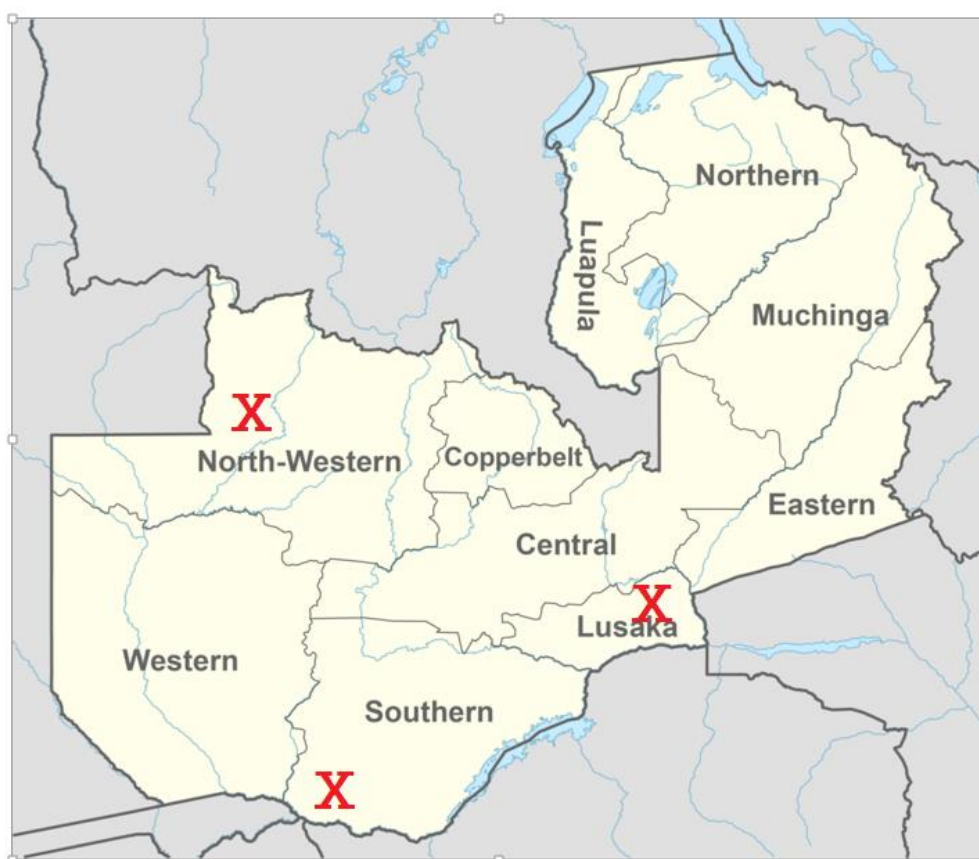


Figure 1.1: Map of Zambia (X shows the provinces where samples for the study were drawn from.

Source: (Wikimedia, 2017)

Only teachers teaching LSENs in inclusive and special schools were involved. To collect the desired data, the study used teachers (120) as the main respondents, two (2) CS in SE and the twelve (12) ESOs responsible for SE. SETs were the main respondents because the study was mainly conducted to establish how they are implementing the curriculum in teaching LSENs. The researcher considered CSs in this study to explain the role played by SETs at different curriculum development stages.

Further, the study did not involve learners and parents of LSENs though they are key stakeholders in CDP. The study is pedagogy-related and those involved in pedagogy are teachers. Teachers are crucial stakeholders in curriculum implementation. Curriculum review gets feedback from teachers for its improvement. For such reasons, it concentrates on teachers.

1.11 ETHICAL CONSIDERATIONS

The concept of ethics in education research is increasingly becoming a very important undertaking just as it is in the medical and other sensitive fields that require that individual's privacy and rights to participate in studies are protected. Kvale and Brinkmann (2009:273) observed that "it may be difficult for a researcher to anticipate the potential ethical and political consequences of an interview". We today live in highly sensitive political world where even academic studies of a nature like this one may be regarded as political suicide once one engages in it. People become sensitive and they may end up not freely participating in the study. Lindon (2015) believes researchers in social sciences and psychology need to take ethics as a way of respecting research participants and therefore informed consent should be sort from respondents. For people to be honest and provide honest answers, their willingness to participate in a study is vital (Lindon 2015; Mukherji & Albon 2015). The need to explain the purpose of the study, procedures for data collection, right to withdraw, what respondents would be asked to do or not to do, who will have access to the data, are some of the important ethical considerations Mukherji and Albon (2015) explain as features of informed consent.

Prior to undertaking this study, ethical clearance was sought from the University of South Africa (UNISA). The MoGE also granted the researcher written permission to conduct the study in the intended provinces. A letter introducing the researcher was also collected from UNISA and the researcher's place of work, UNZA (*see Appendix C*). In the field, the research paid courtesy call to the District Education Board Secretary (DEBS) in each district where data was collected. The researcher explained the purpose of his study and asked to visit the special and inclusive schools where data was collected.

To ensure ethical considerations of the respondents in this study, the following tasks were done:

- The purpose of the researcher's visit was discussed with the school administration.
- An explanation of the study was given to respondents. Respondents were informed that the study was purely for academic purposes and if they wished to have access to the results, the thesis would be made available in the thesis repository of the University of South Africa and upon request.
- The researcher further requested permission to use an audio-recorder during interviews.

- Respondents were promised privacy of their information.
- No names were used on questionnaires and recorded interviews and respondents were also advised of this.
- Respondents were promised that all recorded interviews would be used for the purpose of the study and destroyed after the results of the study had been verified by the university.
- Respondents were requested to sign a consent form.

1.12 DEFINITION OF KEY TERMS IN THE STUDY

1.12.1 Curriculum

Bishop (1985:1) defines curriculum as “a sum total of all experiences a pupil undergoes” further explaining that “a curriculum is much wider than a syllabus which only is only part of the curriculum”. Doll (1996, cited in Farrell, 2008:11), defines the curriculum as the formal and informal content and process by which learners gain knowledge and understanding, develop skills, and alter attitudes, appreciations and values under the auspices of that school. Curriculum is more than simply a course of study. Taneja (2012:292) notes:

instead of including academic subjects only, it includes the totality of experiences that a pupil receives through the manifold activities that go on in the school, in the classroom, library, laboratory, workshop, playgrounds and in the numerous informal contacts between teachers and pupils. In this sense, the whole life of the school becomes the curriculum which can touch the life of the learners at all points and help in the evolution of a balanced personality.

It is therefore an “instructional and educative programme by following which the pupils achieve their goals, ideals and aspirations in life” (Taneja, 2012:292). A school’s aims are expressed through the curriculum. What would a school without a curriculum be like? This description applies to a school curriculum as opposed to national education curriculum that all schools in a country should follow. A school curriculum is a decentralised expression of the national curriculum. Though there are many definitions of curriculum, the curriculum addressed in this study is the intended or taught curriculum.

1.12.2 Curriculum Change

UNESCO-IBE (2013:45) explain the term change “as a generic term that includes a host of concepts such as ‘innovation, development, and adoption, whether planned, unplanned, unintended, spontaneous or accidental’”. But planned curriculum change may mean

innovation at classroom or whole school level as well as the reform and reconstruction of a whole or parts of the education system of a country. Curriculum change is a process. Marsh (2009) explains curriculum change as a series of phases such as needs assessment, initiation or adoption, implementation or initial use and institutionalisation. The teacher's involvement at each of the stages is important for a successful curriculum change. There are many factors that can drive change. UNESCO (2013:49) observes that "change can arise from the realisation that what has been taught in the past will not prepare young people for successful lives in future and that the quality and relevance of curriculum must be improved". Change can be influenced by the need to improve the economy; preserve and appreciate local culture and identity; reduce inequalities; promote humanitarian values; enhance global competitiveness and integration; and embrace new technologies.

There are many reasons for change but if curriculum change is driven by the need to improve the quality of education, then such change should be embraced. If the change even goes further to embrace an inclusive curriculum, such a change deserves everyone's support. Each of the factors of change may have its own source. Politicians, the industry and its demands, religious groups, civil society organisations, professionals may suggest or initiate change. Gruba (2004) noted that many changes are proposed because they are an indisputably "good thing". One would find it hard to argue against the introduction of laboratory classes into a subject based on lectures and tutorials. In the same way, an inclusive curriculum which is developed in consultation with all teachers, particularly SE teachers, would be easy to implement because they would understand it better. Byers and Rose (2004) and UNESCO (2013) further support school autonomy or school-based curriculum respectively in curriculum development. The philosophy behind this is that schools have different characteristics. Drawing a curriculum suitable to the school but within the confines of the general education aims/guidelines would be helpful to SE especially when it comes to adapting the curriculum. This depends on how much schools are empowered to do so and whether legislation supports such autonomy of schools to operate in such a manner at curriculum level. In this study, the curriculum change being addressed is the reform and reconstruction of the whole curriculum that gave birth to the 2013 curriculum framework. In Zambia, the concept of school-based curriculum is not yet developed although there is reference to what is called a localised curriculum.

1.12.3 Special Education

According to Singh (2012:1), SE “refers to specifically designed instruction which meets the unique needs of exceptional children. It involves special instructional materials, teaching techniques, content, equipment and facilities”. Mangal (2012:29) defines SE as a term that “refers to a distinctive type of education, specifically and specially designed for meeting the needs of exceptional or special children”. The National Council for Curriculum and Assessment (1999:23) defines SE as “any educational provision which is designed to cater for pupils with SEN and is additional to or different from the provision which is generally made in ordinary classes for pupils of the same age”. In this type of education, learners who because of physical, emotional, cognitive limitations cannot benefit from the curriculum as provided in schools are provided with modified and adapted teaching to meet their learning needs. Such learners include but are not limited to learners with intellectual challenges; learners with physical impairments that impede learning to some degree; those with sensory impairments such as hearing and vision who cannot benefit from audio- or visually-presented learning materials; learners whose behaviour is against the socially accepted norms that the classroom may not condone; and those with communication difficulties and learning disabilities among others. SE desires to ensure that all learners regardless of their abilities have access to the general curriculum through curriculum modifications and adaptations in order for them to compete and benefit from opportunities society provides. Over the years, there have been many forms of providing SE to LSENs. These forms include traditional special schools, special units, hospital units, rehabilitation centres and inclusive schools. In this study, SE is a type of education provided to learners who cannot benefit or minimally benefit from the general curriculum and teaching methods due to limitations in their physical, emotional, mental or psychological wellbeing. It is such learners that may need an adapted curriculum, a modified curriculum or a number of accommodations in order to learn effectively.

1.12.4 Learners with SEN

The area of SE has attracted attention especially in the use of terminologies. There are several terms that have before been used to mean the concept ‘LSENs’. Terms such as handicapped (MoE 1977); exceptional children (Kirk, Gallagher, Coleman & Anastasiow 2009, Mangal 2013); or learning disabled (Mangal 2013); have been used to refer to people with disabilities. Singh (2012) prefers to use the concept “Children with SEN”. While there has

been a change from the term ‘handicapped’ to ‘disabled’, the term mostly used in main documents to refer to such learners is ‘children with SE needs’ (MoE 1996; MoE 2013a). It has been observed that the use of terms such as handicapped, disabled and exceptional was diagnostic in approach and did not focus on correcting the problem but identifying it. The use of the concept “LSENs” focuses on the needs of people with disabilities that need to be met in order for them to participate in society on an equal basis with others without disabilities. The term disability was more labelling than helping. In this study, LSENs are learners who are identified to have hearing, visual, physical, intellectual impairments that affect their ability to learn. It also covers learners that are gifted or talented, learners with specific learning disabilities, communication problems, autism, and behavioural disorders. These are learners with disabilities of any degree as long as they are eligible for SE services.

1.12.5 Special Education Needs (SEN)

This concept refers to the specified needs that enable persons with disabilities to access services such as education. According to MESVTEE (2013: vii), SEN “refers to the education services and strategies provided to learners with different abilities and challenges”. Thus, this study will use the above definitions to refer to SE needs and includes any form of tangible or intangible help (service) provided to learners in order for them to access learning; for example, learners with mobility problems provided with a wheelchair or aided to move around their learning environment. Modified strategies in teaching that enable learners with disabilities be able to learn or compensate their loss become SE needs. The individualised education programme, screening services, assessment for disabilities, additional learning material and many other services add to the list of SE needs.

1.12.6 Special School

Singh (2012:6) defines a special school as including “both residential institutions and day schools. In the residential school, a child is separated from the family and community and is placed institutionally with other children who have similar problems requiring specific services from trained staff”. In this study, a special school can be a boarding or day school providing special services to learners with disabilities only. The school has trained staff specialised in various subject areas. Current education philosophy is shifting toward inclusive schooling rather than separate special schools. The special school has been found to have a wider range of disadvantages though the intention in establishing them may have been good. In a special school, learners are denied the wider view of the world and are confined

according to the features they possess. This seems to be discriminatory. Learners with disabilities in special schools are denied participation in the wider community, and they are denied interaction and a share of emotional satisfaction they would derive from the wider community of learners and peers without disabilities. The concept of a special school must be redefined not to mean segregation; otherwise, the effects on the child are detrimental to their general development. The redefinition of a special school is the inclusive school.

1.12.7 Inclusive School

This is a learning institution where LSENs learn together in the same classroom sharing all sorts of learning facilities available. Such learning facilities include teaching methods, learning aids, and adaptive equipment among other learning requirements. The concept of inclusive school should not be narrowed to mean placement of the disabled learners in the mainstream classroom. Even learners without disabilities can join special schools and change the concept of a special school into an inclusive one. The concept implies that a full package of pedagogical skills, practices and resources should be available to make placement a reality. In an inclusive schooling arrangement, marginalisation either by other learners or teachers or even in terms of scarcity of specialised resources should not exist. Participation in learning and extra-curricular activities should not be selective and learning and teaching resources should be available to meet their needs.

1.13 OUTLINE OF THE STUDY

This thesis is organised in six chapters as follows:

Chapter 1 comprises the background information, statement of a problem, aims, study objectives, and research questions. It also includes significance of the study, definitions of terms used, study delimitations, a brief introduction to the theory that guided the study and ethical considerations.

Chapter 2 provides the literature review systematically arranged according various headings relevant to the problem, research questions and objectives of the study. This chapter further presents literature from a global curriculum development theory perspective via curriculum development models before reviewing the Zambian case. It highlights the challenges in CDP from different countries' perspectives.

Chapter 3 is a presentation of the theoretical framework. The deliberative curriculum theory has been explained in relation to the study.

In Chapter 4, the methodology is presented which includes the research approaches and design used, the population, the sample and sampling procedures, research tools used and the data collection procedures. After that, data analysis and ethical considerations are explained. The chapter also addresses issues of credibility, trustworthiness and limitations.

Chapter 5 provides the results/findings of the study and discussion according to the adopted mixed-methods design. Quantitative data is presented in univariate and bivariate tables and figures generated from SPSS. Other statistical features elucidated in this chapter are the mean, the standard deviation and the bivariate correlations. Qualitative data is organised in themes according data similarities with the help of NVIVO software. Some qualitative correlations and graphs are also presented. A summary of the results is given at the end of the chapter.

In Chapter 6, the conclusion, contributions to the body of knowledge and recommendations are presented. The study ends with the references and appendices which include research instruments, sample of interview scripts, ethical clearance letter, permission letter and selected diagrams related to the analysed data.

1.14 CHAPTER SUMMARY

This chapter has introduced the topic, “Curriculum Implementation for LSENs: The Case of Selected Inclusive and Special Schools in Zambia”. The chapter identified a problem that was worth investigating, “How are SETs implementing the curriculum for LSENs in special and inclusive schools in Zambia?” There is no curriculum for LSENs per se because all SETs have to adapt the curriculum for LSENs from the general curriculum (MESVTEE 2013a). The chapter has provided a detailed background of the development of SE and the nature of curriculum provided to LSENs. The study introduces both quantitative and qualitative approach to collect data in order to investigate the identified problem. The next chapter provides a review of the literature that informs the study.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviews scholarly works related to the topic under study. Literature review is a very important undertaking in any research. Kombo and Tromp (2013) believe an effective literature review should provide a critical, organised and analytical orientation of the study and also be able to justify the need for one to study a particular topic or research problem. They state that a literature review helps to highlight the relationship between the past and the present study. While highlighting the importance of literature review in research in outlining academic knowledge and subject content relevant to a field, Mukherji and Albon (2015:247) define literature review as, “a critical analysis of related literature in a relevant field to that of the research being undertaken”. Research studies need to be based on a literature review to give perspectives of similar or related studies conducted in the field. A literature review illuminates the research and provides guidelines and comparisons between different contexts. World over, nations have tried to review their curricula to fit with international standards in order to educate a learner for the global village: many studies have been conducted on the topic. Thus, it adds rigour to research.

In this study, the literature review is guided by the title of the study (curriculum implementation for LSENs) and the objectives. It provides a critical analysis of the different contexts in relation to this study. This literature review first provides definitions and explanations of curriculum from different scholarly perspectives, gives an overview of global curriculum reforms in selected countries and how they have embraced SE in their respective reforms, and finally the review presents the curriculum implementation strategies and its challenges.

2.2 UNDERSTANDING THE CONCEPT OF CURRICULUM

The concept of curriculum has gained many definitions from different scholars. For instance, Igbokwe, Mezieobi and Eke (2014:92) define curriculum as “a systematically organised body of knowledge through which the goals of education can be achieved for the fulfillment of the needs and aspirations of any given society”. Taner and Taner (1980:18) define curriculum as “planned and guided learning experiences and intended outcomes formulated through

systematic reconstruction of knowledge and experience under the auspices of the school for the learner's continuous and wilful growth in social competence". Bishop (1985:1) defines curriculum as "a sum total of all experiences a pupil undergoes" further explaining that "a curriculum is much wider than a syllabus which is only part of the curriculum". Igbokwe, Mezieobi and Eke (2014) and Bishop (1985) hold the idea that curriculum is a sum of experiences a pupil goes through in their life experience. Brantlinger (2008) refers curriculum to a course of study while Bishop (1985) and Taneja (2012) both explain that curriculum goes beyond the course of study, the subjects taught and syllabuses guiding learning.

From the definitions above, only Taneja (2012) reflects a teacher as part of the curriculum. Hopefully, such definitions do not consciously downplay the role of a teacher in the curriculum. With regard to this study, the teacher is married to the curriculum even though the curriculum expresses the learners as beneficiaries of it. The teacher is actually the driver of the curriculum as it is not only implemented but developed.

For the purpose of this study, it is important to understand curriculum from different perspectives. UNESCO-IBE (2013) identifies five types of curriculum: the intended or specified curriculum; the implemented or enacted curriculum; the experienced curriculum; the hidden curriculum and the null curriculum.

- Intended or specified curriculum is focused upon the aims and content of what is to be taught – that is, curriculum which is planned and expressed through curriculum frameworks and other formal documents which may be mandated by law. In the Zambian context, curriculum aims are expressed in the 1996 'Educating our Future' policy document and the latest 2013 curriculum framework.
- Implemented or enacted curriculum relates to what is offered for learners in schools which may include local interpretations of what is required in formal curriculum documents. In these cases, curriculum and instruction are seen as being closely interrelated. Njeng'ere (2010) explains the implemented curriculum as the actual teaching and learning activities taking place in schools; i.e. how the intended curriculum is translated into practice and actually delivered. It is also defined as the 'curriculum in action' or the 'taught curriculum'.
- Experienced curriculum refers to the formal learning actually experienced by learners. This is focused upon the learner, his or her knowledge and perspectives, as well as his or her ability to learn and interact with the curriculum (UNESCO-IBE 2013).

- Hidden or implicit curriculum: Alongside the formal curriculum within educational establishments, there exists a hidden curriculum. This refers to values, attitudes and principles which are implicitly conveyed to learners. According to UNESCO-IBE (2013), a hidden curriculum refers to the students' experience at school beyond the formal structure of the curriculum. The messages contained in the hidden curriculum may complement the intended and implemented curricula or they may contradict them. A hidden curriculum is a side effect of an education: "[lessons] which are learned but not openly intended" such as the transmission of norms, values, and beliefs conveyed in the classroom and the social environment. Any learning experience may teach unintended lessons. The hidden curriculum is argued to encourage social control first within the school itself and, subsequently, within society as a whole.
- Null curriculum refers to those areas and dimensions of the human experience which the curriculum does not identify and which are not addressed through teaching. Null curriculum refers to what is not taught but actually should be taught in school according to the needs of society (Beyer & Apple 1988; Kridel 2010). Beyer and Apple (1988) explain the null curriculum as that which constitutes what students do not have an opportunity to learn under the auspices of schools. That may include lack of proper equipment, time, the controversial nature of the aspect to be taught, or certain aspects that learners are supposed to learn being omitted. In fact, the null curriculum is a kind of vacant phenomenon between the ideal of curriculum value and the actual development of curriculum. For example, environmental education, gender or sex education, life education, career planning education, local culture and history education courses are still neglected in some schools. There is a gap between incomplete curriculum content and ideal integral curriculum which meets the needs of physical and mental development of learners. Curriculum issues related to SE are also a matter of concern which may also be considered under the null curriculum. Thus, it is very important to think of what is not taught to LSENs but is relevant to their lives. SE issues usually receive attention last and a null curriculum should be there to help cover up such deficiencies. In the case that the new curriculum omits vital learning aspects, these should be identified, documented and planned for teaching, thereby providing the missing link in the provision of services for LSENs.

While curriculum has a 'bigger' perspective, this study focuses on curriculum as taught in school especially to LSENs. It focuses mainly on the learning experiences the learner goes

through in school, the content, the resources that help to deliver the content as well as the human resources delivering the same. Thus, this study tries to find out how SE teachers are delivering the curriculum to LSENs bearing in mind that for effective learning for LSENs to take place, curriculum implementation should be done properly. If the curriculum as implemented or enacted is problematic, then the curriculum as intended or planned does not achieve its aims, goals and objectives. In this sense, this study concentrates on curriculum as taught, the intended and the implemented curriculum, and not the hidden, experienced and null curriculum.

Having discussed the different types of curriculum according to UNESCO-IBE (2013), the following section introduces the models of curriculum development. The models reviewed include Taba's interactive model, Wheeler's cyclic framework, Tyler's model of learning experiences and Lynch and Smith's interaction model in curriculum design and development.

2.3 MODELS OF CURRICULUM DEVELOPMENT

Several models of curriculum development have been developed over the years. For the purpose of this study, theories have been selected for review because of how they relate to this study. One of the curriculum theorists that influenced curriculum design and development was Hilda Taba. She (1962) presented an interactive model, also known as "Instructional Strategies Model", which focuses on the planning of instructional strategies and considers these as the basis of curriculum design. The focus is on how a learner interacts with the material, the teacher or another student. The model includes five mutually interactive elements of teaching and learning system: (i) objectives, (ii) contents, (iii) learning experiences, (iv) teaching strategies, and (v) evaluative measures. Some of the innovative aspects of Taba's model include: determining required objectives and related content; selection and organisation of learning experiences in accordance with specified criteria; selection of a variety of teaching strategies; and evaluation procedures and measures. The model gives due consideration to external factors that may affect various components of a curriculum including the vicinity and community of school's location; the school district's educational policies; the goals, resources, and administrative strategies of the school; teachers' personal style and characteristics; and the nature of the student population. Taba's model gives considerable insight into designing a curriculum for SE. Many LSENs may be deprived of the interactive features a curriculum is supposed to have. Due to negative attitudes, LSENs may find challenges in interacting with peers, the teacher and the material.

The nature of content in the curriculum, the teaching strategies and the objectives all require that they are aligned toward meeting the learning needs of LSENs. The nature of the LSEN's disability may provide limited access to learning experiences outside the school. Using this model, such gaps should be taken care of so that the curriculum caters for all learners' needs regardless of the differing abilities. From this study's perspective and relating to Taba's models of curriculum design, what external factors affect curriculum design and implementation for especially LSENs? Thus, this study endeavours to establish the challenges that impact curriculum implementation in Zambia.

Another model is that provided by Wheeler (1967). Wheeler's simple cyclic framework of the curriculum development includes formulation of aims and objectives; selection of learning experiences; selection of content; organisation and integration of the learning experiences and content as well as the methods of teaching; and finally evaluation of the effectiveness of the curriculum (Bishop 1985). A closer look at Wheeler's framework reveals the teacher's role in curriculum development throughout the process. The process is considered a never-ending process, without a beginning or an end. This gives room for ongoing curriculum evaluation and strengthening. Curriculum developers have several opportunities for correcting whatever has been made wrong in the initial CDP (Nicholus & Nicholus 1978). In view of this study, the cyclic nature of the curriculum allows curriculum developers to consider areas that could have been initially omitted in the initial CDP. In the case of SE, areas that the study may reveal were neglected or overlooked can still be reviewed and included in the curriculum.

In planning the curriculum for LSENs, the process may not be different provided that the content, individualised attention, personal and social growth are taken into account. Using a cyclic idea in curriculum development, Byers and Rose (2012), like Wheeler (1967, cited in Bishop 1985), propose a cyclic process of policy planning for LSENs emphasising target setting and a review of the main needs of LSENs. Adding to Wheeler's cyclic model, Byers and Rose (2012) see curriculum development for LSENs as cyclic and involving planning, formulation, implementation and review but characterised by consultation of learners, staff, governors, parents and other agencies at all stages. The key idea in the development of a democratic inclusive curriculum is the cyclic nature. In the cycle, issues that are omitted during the initial curriculum development can be brought into the curriculum to benefit the learner. It is not right to have LSENs sit in a classroom and be turned into observers of the learning process. They need to be active participants in the learning process and if certain

things are lacking for their effective learning, for reasons of having been overlooked or value underplayed, the cyclic model provides an opportunity for amendments to be made. In the current study, the model may be a useful foundation for the development of the Zambian curriculum. The aspect of consultation of stakeholders throughout the process of curriculum development and the recognition of curriculum development evolving in a cyclic manner should be noted seriously as it promotes flexibility. Taneja (2012) views such a curriculum, as 'democratic'; thus, it takes into consideration the learning needs of all learners as individuals. Having a rigid curriculum does not help in meeting the needs of LSEs. According to Savolainen, Kokkala and Alasuutari (2000: 133),

Curricula should be relevant to the needs of the context and the community and foster the development of the 'whole learner'. Curricula should be flexible enough to accommodate the diversity of learning styles and pace, as well as provide possibilities for social and emotional development.

This study therefore provides an avenue for consultation of the stakeholders in curriculum development, the teachers and other professionals, parents and LSEs, on what should and should not be included in a curriculum. More democratic and flexible CDP empowers schools to develop their own curricula according to their contexts but following the main national curriculum document and guidelines. In this way, curriculum developers would reduce the number of omissions and neglect of certain requirements in the curriculum for LSEs.

Tyler (2013) believes that there are four key questions to be asked when developing a curriculum. There is the need to consider the selection of objectives, learning experiences, organising learning and evaluating the learning experiences. At the first level, Tyler believes that identifying educational objectives should be the basis for selecting materials, outlining content, and developing instructional procedures and preparing tests and examinations. Objectives can be derived from learners' interests, problems they encounter in learning and the purposes of learning what they learn in their minds. However, Tyler observes that there is no single source from which objectives can be derived. This means that there is need to consider a wide spectrum of views from various stakeholders in order to come up with the desired curriculum objectives. In line with this study, LSEs, their teachers and parents are some of the key stakeholders that should be consulted when designing the curriculum. Furthermore, Tyler brings in special objectives tailored toward LSEs; an example he provides is tailoring objectives for a community whose elementary school children suffer

from dietary deficiencies and ill-health. Curriculum objectives must therefore reflect the context, as Savolainen et al (2000) also observed. Though Tyler (2013:8) warns, “it is unnecessary for the school to duplicate educational experiences already adequately provided outside the school”, this is different in the case of learners with various disabilities. Duplication of objectives in the designing of a SE curriculum should be permitted in order to meet the differing learning needs of LSENs. For instance, learners with mental challenges require repetitive learning tasks for them to master skills, knowledge, attitudes, morals and values. School curriculum should therefore take cognisance of this fact. The need for studying the children’s contexts can be of help in determining the objectives for the curriculum.

Following the selection of objectives is the selection of learning experiences. Tyler understands learning experience beyond the content taught and interaction with the teacher. To him, a learning experience is the interaction between the learner and the external conditions in the environment to which the learner can react. In simplified language, this is a combination of different learning activities that help the learner achieve the objectives. According to Tyler (2013: 63), “It is possible for two students to be in the same class and for them to be having two different experiences”. This applies to inclusive education practices. If the curriculum provides wide experiences from which learners can select their learning experiences, inclusion would be a reality because such learning experiences would provide every learner with the opportunity to learn. It should, however, be noted that learners learn best by doing and not by what the teacher teaches. Curriculum planners should therefore choose those learning experiences that will really help the learners achieve the objectives.

The third concern of Tyler is how to organise the learning experiences. He believed that learning will be most efficient only if it is properly organised. Organisation is a very important stage in curriculum development because it ensures the efficiency and effectiveness of instruction that brings about major educational changes in the learners. According to Tyler (2013), learning experiences should be well-organised and related between grade levels. When organising learning experiences, curriculum developers should consider continuity, sequence and integration. Continuity refers to the consolidation of the learners' learning experiences through providing opportunities for continued skill development. A desired skill should be dealt with over and over though at different levels so that learners can master it. Sequence, though similar to continuity, “emphasises not duplication, but rather higher levels of treatment with each successive learning experience”

(Tyler 2013:85). Sequence makes vivid how important a learning experience is in building upon the other successively. When it comes to integration, it is expected that the learning experiences will help the learner to see the relationships among themes in different subjects and be able to develop skills to use skills learned in one subject in the other. This therefore depends on how well the learning experiences have been organised.

The last level in curriculum development according to Tyler is evaluation. He notes that as objectives and learning experiences organised, when they are related, sequenced and integrated, evaluation is taking place. “The process of evaluation is essentially the process of determining to what extent the educational objectives are actually being realised by the program of curriculum and instruction” (Tyler 2013:106). It should be noted that Tyler’s ideas of curriculum development have been overtaken by modern developments. Many countries today talk about outcomes-based learning as opposed to objectives. However, the key principle is that curriculum development should follow coherent stages that would help realise the learning needs of learners.

More recent curriculum models have been developed. Though they do not depart so much from the old models, key practices in recent models propose consultation and stakeholder involvement (UNESCO-IBE 2013). Lynch and Smith (2010) propounded the interaction model in curriculum design and development. As an improvement on Tyler’s approach, the developer or designer can move around elements as needs arise thereby breaking up the process. The developer or the designer is able to anticipate that change in one element will affect the other elements. Brady and Kennedy (2010) claim that teachers have more flexibility in this model to rearrange curriculum elements to suit their learners’ development needs. When curriculum change is anticipated in one area, it affects other areas. This way, the teacher will be able to find solutions to problems that arise during the implementation. The interaction model incorporates four key elements in designing curriculum: stating objectives; selecting the general experiences; evaluating the learning experiences; and organising the experiences. The four elements are found to be interactive throughout the process of curriculum development. A critical view of the interactional model sees a teacher as a key player in all four elements. This model provides a reflection of old models by Tyler, Wheeler, Taba and others. The next section provides a brief reflection on inclusive curriculum. It explains the concept of inclusion in the context of curriculum especially for LSENs.

2.4 DEVELOPING AN INCLUSIVE CURRICULUM

Though the concept of inclusion is more synonymous with education, the world today has realised the need for promoting inclusive society where everyone regardless of their potentials are part of the same community. Inclusive education is a philosophy for improving the lives of persons with disabilities and learning of LSENs. It is an advocacy principle that schools should endeavour to meet the needs of LSENs within the ordinary classroom, the classroom in which all learners should be able to learn from irrespective of their ability. That is what we call an inclusive classroom. Adetoro (2014) equates inclusion to democracy, where learners with disabilities should be able to have freedom of association. Booth & Ainsow (2002:3) say, “Inclusion involves change. It is an unending process of increasing learning and participation for all students”. The aim of inclusion is to ensure that everyone regardless of personal circumstances must participate in the activities of their nation. The aim of inclusion is in line with the Millenium Development Goal (MDG) number 2 on universal primary education by 2015. Everyone must have access to education. Sub Saharan Africa is reported to have recorded the best record improvement in net primary education enrolment of 20% (United Nations-UN 2015). The principle of inclusion is further in line with the Sustainable Development Goals (SDGs) 2030 replacing the MDGs. The Sustainable Development Goal number 4 on quality education emphasises that nations should strive to provide an inclusive and equitable quality education and promote lifelong learning opportunities for all. The school is the best avenue for promoting the principle of inclusive education. Thus, the school should value all learners and staff, increase their participation and reduce their exclusion from, the cultures, curricula and communities of local schools (Booth & Ainsow 2002). Although persons with disabilities may be the most vulnerable in terms of exclusion from social services, inclusive education must strive to ensure that barriers for all perceived to be marginalised are eliminated to enable access to education. From this explanation, the curriculum becomes the best if not the only conduit for promoting inclusiveness. The curriculum must reflect the values of an inclusive society. If curriculum is not inclusive, exclusion is the norm under practice. But today’s society should fight against exclusion.

The UN General Assembly declaration of 1948 recognised respect for human rights and freedoms including access to education for all. This was amplified in 1989 to include the rights and freedoms of children who are disabled. Article 26 of the UN is the first international recognition that all human beings have a right to education (UN 1948) and that

education is imperative for the full development of a person (UN 2006). Accessibility is a crucial to breaking barriers for persons with disabilities. Article 9 of the United Nations convention on The Rights of Persons with Disabilities says;

To enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas. (Handicap International 2009:52)

If society and nations alike are to be inclusive, they need to provide accessibility to persons with disabilities to the many opportunities including education as much as possible. Education and schools in particular should provide the tone by providing a barrier free curriculum so that children with disabilities have access to education. Education is said to be the best equalizer. Inclusive schooling implies that all children, no matter how severe their disability or how intense their needs, can be accommodated in the regular class in their neighbourhood school which they would attend if they did not have a disability. According to Singh (2012) some of the characteristics that signify an inclusive schooling environment are that all children can learn; the environment should acknowledge and respect differences such as race, gender, ethnicity, language and disability in children; and that the education structures, systems and methodologies should meet the needs of all children. The curriculum, being the reflection of society's norms, values and attitudes should be non-discriminatory.

The following section provides a global view of curriculum reforms. First, a review perspective of developed countries is provided followed by an African perspective. In each case, curriculum reforms have been reviewed from a general education perspective.

2.5 CURRICULUM REFORMS: THE GLOBAL VIEW

This section presents samples of curriculum reforms around the world in general and later reforms involving SE. SE does not exist in isolation, neither does SE curriculum. If anything, there may be no such a thing as an "SE curriculum" for if this was the way to go, we would be counteracting the philosophy of inclusion. All learners follow the same national curriculum along different routes to achieve the curriculum goals. Since this study resides in the discipline of curriculum studies, before explaining curriculum reforms and how implementation has taken place around the globe, a general overview is provided of the

sampled countries. The general view provides the genesis and or connection to why implementation of SE curriculum may be or may not be well implemented in these countries. Thus, the approach strengthens the philosophical argument or basis for this study.

2.5.1 Finland

From the five Nordic countries namely Denmark, Sweden, Norway, Iceland and Finland, I selected Finland for this literature review. Finland is one of the best examples globally that has benefitted well from meaningful curricula changes. Between 2000 and 2009, Finland featured as the best in reading, science and Mathematics in the Programme for International Students Assessment (PISA) performance among the OECD countries (Kivirauma and Ruoho 2007; OECD 2013; Sahlberg 2009).

After parliament's decision to reform the basic education curriculum in the mid-1960s, Finland got her first new core curriculum in 1970. This was a curriculum that led to the establishment of comprehensive schools in Finland. The comprehensive school curriculum emphasised equal educational opportunities and the attainment of educational goals, contents, methods and assessment procedures. According to Halinen (2013), the implementation of this curriculum required a centralised, firm and strict guidance of an overall reform.

A board responsible for education, the Finnish National Board, initially had the mandate to plan and decide the national curriculum as well as to support municipalities in implementing reforms. It is also responsible for disseminating ideas about the new curriculum. From the 1970s, municipalities were given the mandate to run education. Between 1972 and 1977, the reform of comprehensive education was implemented in the whole country. The comprehensive school was nine years of basic education divided between 1-6th grades of primary school level and 7th to 9th level grade as secondary.

Another reform was implemented in 1985 which did away with the comprehensive school ideology of grouping or streaming in Mathematics and languages saying it denied many students opportunities to access higher education. This meant that many students had access to further their studies. Municipalities were more empowered financially to undertake quality education programmes around the country.

In the 1994 reform of the curriculum, serious changes were made to the previous curriculum. Among the major changes was empowering of the municipalities and schools to make decisions of their own as opposed to the way it had been in the previous curriculum where

guidance was provided by the National Board of Education (NBE). Thus, power was decentralised from the top to the bottom. Municipalities and schools were given power to draw up their own curricula on the basis of the national core curriculum. The role of the National Board of Education to inspect schools and the textbooks was abolished. A culture of trust in teachers to choose what was right for them to teach and improve education was cultivated more through this reform. In developing the new curriculum, a highly democratic practice of involving stakeholders, especially teachers, was utilised. This democratic practice in curriculum development yields satisfaction and a positive feeling of being appreciated and recognised. Sahlberg (2009: 28) reports:

inviting teachers and schools to participate in social development had an enormous positive impact on the Finnish education sector in the 1990s. Teachers could see that the system believed that schools and communities are the places where decisions concerning the curriculum and overall arrangement of schooling should be made. Teachers, with their high professional and moral qualifications, mostly welcomed this new responsibility. Also, schools very quickly embraced their new roles in leading change within the culture of trust. School improvement not only emerged in Finland as a consequence of this new trust, but also became much more diverse than earlier.

Further, from a warm working culture cultivated between the National Board of Education and stakeholders such as teachers and principals, the 2000 core curriculum reform in Finland was symbolised by cooperation and interaction among stakeholders such as teacher trainers, researchers, publishers and people representing different areas of society and the economy. Stakeholders had an opportunity to make comments on all new curriculum drafts. Feedback about the process was given regarding the weaknesses and strengths of the new curriculum and its implementation process. Halinen (2006) reports that such feedback helped the National Board of Education to plan the support, guidance and further training of teachers needed in the implementation process.

Many lessons can be learned from the curriculum reforms in Finland. For instance, the aspect of “teacher involvement” is of interest to this study, the first objective endeavoured to find out whether SE teachers in Zambia were involved in the whole process of curriculum change that led to the curriculum currently being implemented. The literature review here gives impetus to further establish teachers’ opinions if they were not involved. We learn from the Finnish involvement of teachers in the reform and how satisfying it was to teachers and principals, that teachers feel respected and acquire a sense of ownership from their

involvement in the whole process of curriculum development. When such a culture is cultivated, implementation should not be a problem.

In 2001, national objectives for the basic education curriculum were revised, teaching time hours for different subjects increased and more emphasis was placed on the teaching of mother tongue and literature. Subjects like health education were introduced. All this was embraced in the legislative reforms of 2001 giving rise to another core curriculum reform in 2004 in which preschool education; basic education and general upper education were enshrined.

At the time of writing this literature review, Finland already had an in-waiting core curriculum for implementation by August 2016 replacing the 2004 confirmed curriculum which was introduced in August 2006. The new core curriculum is expected emphasise the joy of learning. Driving this is the notion that learners need to develop positive emotional experiences, collaborative working and interaction besides creative activity, aspects that are believed to enhance learning. The new curriculum is expected to have reduced subject content with aims emphasising the importance of learning environments and methods, guidance and individualisation and assessment as means to support learning. (MoE and Culture 2015)

The picture presented by Finland gives a holistic picture of all Nordic countries. According to Halinen (2007), Nordic countries have coherent policies on welfare and democracy, equality, equity and inclusiveness of the whole society and in education. For instance, education in Nordic countries is run through municipalities. Municipalities have the responsibility for organising the curriculum and individual learning support while getting financial support from the state which they can use as they wish. In Finland, teachers are very well respected; mutual respect by children, parents and teachers is a virtue which helps in the provision of inclusive education. In Nordic countries, respect for the child, learning process, education and teachers is at the heart of the education system more now than ever. Teachers must be well-trained and supported to deliver content. For instance, in Finland, teachers must have a minimum master's degree to teach. Teachers training to teach LSENs go through a rigorous process of competency and theory training through up to master's level before they start practising. More even, those that wish to teach learners with intellectual challenges have to have polytechnic qualifications. In Finland, teacher education is the preserve of universities. Teachers are experts with autonomy in planning and deciding on how to do their work

(Halinen 2007; OECD 2013). There is strong emphasis on quality teacher training in Finland. Teachers are prepared in theory and practical content with a research component and teaching practicum on their part. OECD (2013) says teachers in Finland are trained to adapt their teaching to different learning needs and styles of students. There is also emphasis on the clinical component. The emphasis on the quality of teachers deserves attention in current research. Though in Zambia, teachers do not need to have a master's degree to teach, the training period is one area we need to learn from. In Zambia, like in many other African countries, teachers are produced at different levels of qualifications by different teacher education institutions. There are teachers who train for certificates, diplomas, degrees and a few at master's level. All these teachers find themselves teaching the same learners, especially those teaching LSENs. A research gap exists here though this study may not cover it thoroughly. It may be a source of concern to expose learners to teachers with different levels of qualifications, and with varying degrees of content and practical knowledge. This may not apply in Zambia alone. What is interesting about the Finnish preparation for a teacher is the fact that this study is also concerned with the training of teachers to adapt the curriculum to needs of the learners. Adapting a curriculum is not simply something one can do just because he/she is a teacher. SE is varied and each LSEN has his/her own needs. It requires a well-trained teacher to adapt a curriculum. This also requires teacher autonomy as practised in the Finnish education system. The Finnish education curriculum allows for differences in localities despite being in the same country. Based on the national curriculum, schools and municipalities design their own curricula. If this was practised in Zambia, a country that is more multi-cultural than Finland, LSENs would benefit.

Although some of the aspects that apply in Finland may not be applicable to this study, this review provides us with a basis to work from. OECD (2013) says through the nine years of comprehensive education with an optional tenth year, education is free, and textbooks and meals are provided. The first nine years of education in Finland is compulsory (Sahlberg 2009). This helps to improve not only attendance but also the psychological attachment to school especially following the human needs theory of Abraham Maslow who believes meeting basic human physiological needs is crucial to human survival and motivation in general. Only when we turn our learning environments into constructive learning environments where learners will find physiological and psychological safety, will it be possible to claim that quality education is being provided. There are many other factors Sahlberg (2009) has observed that contribute to the high quality of education outcomes

among Finnish learners. “Curriculum reform has made primary schools a place where play and learning are combined with alternative pedagogical approaches to help children master basic academic knowledge and skills” (Sahlberg 2009:25). Factors include having well-qualified teachers, adequate funding of schools, schools being well-equipped with teaching and learning material and a low pupil-teacher ratio.

From this perspective, it would be necessary for this study to look at the challenges facing teachers in implementing the curriculum for LSENs in Zambia. Kayuka (2015) observed the poor funding for SE units in Zambian primary schools. This could be an aspect worth investigating to determine whether poor funding has an impact on the implementation of the curriculum for LSENs. However, this study may not be able to fully investigate this factor unless it comes out from the respondents as a challenge.

SE in Finland has a very short history. According to Pesonen, Itkonen, Jahnukainen, Kontu, Kokko, Ojala and Pirttimaa (2015), the Basic Education Act of 1997 allowed many learners with significant disabilities to enter the mainstream school system in Finland. Citing Jahnukainen and Korhonen (2003), Pesonen et al. (2015:163) report that, before 1997, learners with significant disabilities were under the social welfare, home-based care centres and non-formal education institutions. SE in Finland is provided through the comprehensive school. The 1990s reforms which mainly decentralised decision-making to municipalities empowered them to provide education opportunities to all in accordance with the Finnish constitution. According to the Finnish legislation, “the Finnish education system is based on equality, justice of learning and on the principle of inclusion. The most important goal of education is to support growth and development of unique personality in all possible ways” (Järvinen 2007:2).

With the empowerment of municipalities, special schools around the country have been reduced to seven (European Agency for Special Needs and Inclusive Education [EASNI], sa). The number of special schools has been reduced in the interest of inclusion, though special classes have been established in mainstream schools mainly intended to meet the learning needs of profoundly disabled learners in terms of visual, hearing, physical and other impairment. Just as it is for all comprehensive schools, SE is well-supported with qualified teaching staff, quality teaching and learning materials. Inclusion is the first option for municipalities and schools. Unless this option is not feasible, SE should be provided in an inclusive setup. When all fails, a special class, group or school can be established. However,

Pesonen et al. (2015) observe that despite teachers being well-organised and trained in accommodations, the placement of learners with significant disabilities in special classes or units was counteractive to the training provided to the teachers. It must be noted in the interest of this study that decentralisation of decision-making in education is critical to meaningful curriculum implementation. One further interesting discovery coming out of this review, quite unique and different from Zambia, is the fact that the idea of separate curricula for LSENs in Finland was abolished. All LSENs follow the same curriculum but with emphasis on individualised education plans (EASNI sa).

The next section provides a picture of curriculum reforms in the Netherlands. The Netherlands is another developed country perspective that will add value to this literature review in the context of curriculum reforms in general and SE in particular.

2.5.2 The Netherlands

The Netherlands is a developed country in Europe with a high standard of education. Due to availability of literature on the Netherlands education reforms, it was useful to review and learn from its experiences in curriculum reform and implementation. Literature reveals that Netherlands does not have preprimary education but all children start primary school by 4 years with a mandatory age of 5 years (MoE, Culture and Science 2008). Primary education in Netherlands is comprised of general primary education, special primary education and special secondary education. Many children go to public authority schools though private and denominational schools also exist. In 1998, schools for behavioural difficulties, learning difficulties and moderate learning difficulties were converted into special primary schools under primary school legislation. Under the 2003 expertise regional centres law, consortia of special schools and special secondary schools for the visually handicapped, hearing-impaired or those with communication disorders, or with physical, mental and behavioural disorders and chronic illnesses were established. Before 2003, special schools were funded based on the number of children with SEN in the school. This changed to focus on individual learners so that the learner and the parent can decide how the funds can be used and to enable them to choose either a special or mainstream school. Teachers provide supervision to help LSENs to attend mainstream schools. The Netherlands provides for both special schools and fully inclusive schools. There are mainstream schools that integrate learners with special needs within their classrooms; others simply have a special-needs learners' group within the

mainstream school while many others target specific disability groups. Some other mainstream schools just work in collaboration with special schools.

In Netherlands, both private and public schools qualify for funding. There are different Acts governing each level of education. To achieve the aims of quality education, the Netherlands places significance on improved quality of teaching and incentives (UNESCO-IBE 2012). The MoE, Culture and Science (2011) was cited in UNESCO-IBE (2012) saying that the Netherlands places particular emphasis on core subjects, increased teaching time, excellent standards of teaching and both knowledge and skills.

Though targets are set for schools in terms of goals to be achieved at each level of the education system, schools choose from within the framework how much time they should spend on various subjects and areas of the curriculum. Content and methods used to achieve the desired goals of education are not prescribed but what is expected of schools is to tailor their content and skills teaching to the core objectives or goals. Thus, the primary school prepares a child for secondary school and assessment in reading, writing and other skills is done before a child is admitted into secondary school at 12 years and above.

A revised Primary Education Act 2006 gives schools six curriculum areas but with school autonomy to decide how to reach the main education goals namely: personal development of pupils; transfer of societal and cultural achievements; and equipment for participation in society (UNESCO-IBE 2012). Of interest to this study is the autonomy granted to schools to decide how they can reach the desired national education objectives. This has also been observed in the case of Finland though how it is done differs. The autonomy of schools if embodied in the CDP can empower schools and teachers in particular to be creative to devise ways to develop learners to reach their potential within their own contexts. Context is key to CDP and particularly implementation. What is found in 'A' may not be available in 'B' and until schools are given the autonomy to decide how they can develop every child's potential, it will be difficult to attain the millennium development goal on education for all.

Netherlands puts teacher education as one of its priorities in the provision of quality education. Teachers are trained at various levels: primary, secondary and tertiary (universities). Qualified primary school teachers of grades 1 and 2 teaching subjects such as music, art, handcrafts, dance and languages also teach primary SE but not physical education. Most teachers teaching at primary special schools have master's degrees, acquired after their initial training and while they are already serving. While training to teach in either primary or

secondary special school, a student can specialise in a particular field covering a range of impairments. The issue of qualifications and specialisation is crucial in teaching LSENs. In the review of Finland, it was found that there was significance placed on teacher training qualifications. A teacher should have a master's degree. This has resurfaced in this review of Netherlands: though not mandatory, most teachers teaching at special primary schools have master's qualifications. This study will explore this aspect in the Zambian context and relate it to the implementation of curriculum for LSENs.

2.5.3 Nigeria

Like many previously colonised African countries, Nigeria inherited the British education system comprising primary, secondary and sixth form and higher education in most of its regions, apart from the Northern part which adopted an Islamic education system and rejected Western education. From the colonial type of education which was dominated and governed by several ordinances came the concept of Universal Primary Education (UPE) in 1955. Under the influence of Chief Obafemi Awolowo in the Western region, UPE and compulsory education was introduced. This saw an increase in the number of schools and enrolment rates between 1954 and 1955. The Western region progress in education prompted the Eastern region to also pioneer the policy to advance education access to as many eligible children of school going age as possible through an 8-year plan in 1957. However, Labo-Poopola, Bello and Atanda (2009:637) lament that

the government started the programme without adequate planning; thus, the needed finances for thorough execution were grossly inadequate. Summarily put by Oni (2008), almost everything, except the pupils, was absent. Unfortunately, due to pressure and lack of time for proper preparation, the schools were staffed by untrained teachers, therefore of low quality. The programme failed in just 1 year of its implementation.

In 1977, the National Policy on Education was put in place but went through three revisions in 1981, 1998 and 2004. In the 1977 education policy, the Nigerian Federal Government emphasised the right of every child to equal educational opportunities whether non-disabled or disabled. According to this policy, education is supposed to equalize opportunities so that any individual, regardless of background can achieve success. The schools are expected to provide vocational training and preparation for later professional specialisation (Labo-Poopola, Bello & Atanda 2009). There was stress on the philosophy of full integration of

individuals including the marginalised into the community so that they are provided with equal access to educational opportunities at all levels.

By 1979, the constitution of Nigeria made education a shared responsibility of the federal, state and local governments. By 1980s, the Nigerian Education system used the 6-3-3-4 education system giving six years of primary education, three years of junior secondary, and three years of senior secondary education. The other four years were reserved for tertiary education (Igbokwe, Mezieobi & Eke 2014). The change of curriculum which required embracing technology and entrepreneurship skills at junior secondary school level is reported by Igbokwe, Mezieobi and Eke (2014) to have failed because it lacked consideration of important elements during implementation such as manpower, teacher training, laboratories and other equipment. In 1999, a revision to the UPE was made and a new reform dubbed the Universal Basic Education was launched, Labo-Poopola, Bello and Atanda (2009). However, Igbokwe, Mezieobi and Eke (2014) say this change was still a failure.

According to Odetoro (2014), the concept of SE in Nigeria as depicted in the National Policy on Education in 2004 included people with physical, visual, hearing, mental, emotional, social, speech, learning and multiple impairments. The policy further includes disadvantaged groups involving the children of nomadic pastorals, migrant fisher folks, migrant farmers and hunters. The gifted and talented persons were also included in the category of learners that needed SE. However, though Odetoro (2014) observe the need for Government to abolish SE and replace it with inclusion, overcrowding of 1:80 teacher pupil ratio instead of 1: 10 in Nigerian schools was a source of concern that denied the needed individual attention to LSENs.

From the Nigerian curriculum perspective, the inclusion of children of nomadic pastorals, migrant fisher folks, migrant farmers and hunters is a unique understanding of special education provision. This demonstrates that special education understanding should not be restricted to persons or children with disabilities. Human beings find themselves in different circumstances requiring special attention of some kind and the Nigerian context in this literature gives many countries including Zambia a piece to learn from. Ndhlovu (2008) noted the implementation of inclusive education policy in Zambia was limited in both definition and practice. For instance, defining inclusive education as a practice of including children with disabilities within the regular classroom was limiting especially that deaf learners were still being taught by teachers who did not have the ability to communicate in sign language

(Ndhlovu 2008). Although this study does debate the concept of inclusion in totality, SETs teaching LSENs were involved in the study to establish how they were implementing the curriculum. SETs' training is cardinal to effective implementation. Their understanding of the concept of inclusion could help them as implementers not to leave anyone behind. UNESCO-IBE (2016), provides a lucid explanation of inclusive education explaining it as a never ending process, an identification and removal barriers, the presence and participation of all students and the emphasis to include groups of learners who may be at risk of marginalization, exclusion and underachievement. If only we could understand inclusive education from a broader perspective, curriculum implementation would not leave anyone behind. The overcrowding reviewed as a challenge to the implementation of the National Policy on Education in Nigeria is not unique to Zambia. Although this study did not delve into the impact of overcrowding on curriculum implementation, it was expected to come out as a challenge from SETs.

2.5.4 South Africa

I decided to make South Africa part of this review because this is the great country where I am studying for my PhD qualification and knowledge of curriculum changes within the country especially since independence are crucial to this study.

A country's history can determine the nature of education reforms. Different countries have their own history though most African countries may have been under similar colonial leadership. South Africa was under the apartheid era for many years before she became independent in 1994. This meant that the education system was characterised by racial segregation. This is confirmed by Donohue and Bornman (2014:2) who state that "the current state of education in South Africa can, in part, be attributed to the legacy of the education policies instituted during apartheid". There were schools with well-qualified staff for the whites and schools with very few qualified teaching staff for blacks. Poutiainen (2009:24) citing Crouch (2004) and Organisation for Economic Cooperation and Development-OECD (2008) confirm that "by the early 1990s shortages of teachers, classrooms, and equipment in black schools were great. The policies of apartheid had taken their toll on education". For this reason, it was imperative to have curriculum change to respond to the problems created by a racial system of governance.

Between 1994 and 1998, South Africa witnessed three education reforms with one being the most crucial reform dubbed Curriculum 2005 (C2005). Soon after independence in late 1994,

South Africa made a hasty revision to the curriculum, a change that Jansen (2001) said replaced the most glaring racist, sexist and outdated content inherited from the apartheid syllabi. Thus, the political context determined the change of the curriculum. After the first revision, the second change in South African curriculum was the introduction of continuous assessments in all schools.

However, the most ambitious curriculum change came after South Africa formed a Government of National Unity. In 1997, South Africa launched an Outcomes-Based Education (OBE) curriculum, (Jansen 1998, Jansen & Taylor 2003). This was to respond to the need for social cohesion, advocate for democracy and at the same time meet the needs of an economically booming country (Maluleka 2015). C2005 was a compromise reflecting and capturing constructivism, progressivism and traditional essentialism meaning a departure from subject- and teacher-centred apartheid curriculum and pedagogy to a learner-centred curriculum to allow the learner to take control of his own learning with the teacher as a facilitator (Jansen & Taylor 2003). The outcomes-based curriculum aimed at learning that which turns learners into productive members of the community. The emphasis is not on content but skills and competencies. It is rather goal-oriented. It was believed the OBE curriculum would be a solution to improving the economy in South Africa. Jansen (1998) describes the outcomes-based curriculum as explicit to what learners should attend to, directing assessment to intended goals and a measure of accountability for evaluating quality and impact of teaching in schools.

While the outcomes-based curriculum has both strengths and weaknesses, the question seeking answers in the context of this study is “were teachers involved?” Carl (2012:193) observed, “In South Africa, the former curriculum 2005, for instance, was developed at a national level in 1998, and teachers only became involved when they received training in the application of the new curriculum at a school and classroom level”. Coleman, Graham-Jolly and Middlewood (2003) also confirm that teachers were kept in the dark during the CDP of the C2005. Though a critical look shows a top-down curriculum design without teacher involvement at the initial stages, a positive note is that teachers were trained in the implementation. Carl (2012: 194) warns against the top-down syndrome that, “this so-called top-down approach is detrimental to the process of taking ownership of the curriculum”. Jansen (1998) records that despite calls from teachers for more time and training in the new curriculum, the Department of National Education went with the implementation of the OBE, despite its shortcomings, some describing it as anti-democratic because of its nature of pre-

determining what a learner should learn. Many still did not see the difference between outcomes and objectives as a necessary warrant for change in policy because if there was any difference, it was minimal. According to Jansen (1998), the OBE as a curriculum innovation had not taken adequate account of the resource status of schools and classrooms in South Africa.

In this study and taking the Zambian context into account, one of the objectives is to establish teacher involvement in the CDP. Different contexts may have different experiences in implementing curricula. In South Africa, for instance, Bantwini and Diko (2011) investigated factors that prevented South African District Officials from the Eastern Cape Province from providing effective teacher support during the implementation of the 2002 curriculum reform known as the Revised National Curriculum Statement (RNCS). District officials in the South African context are intermediaries between the national, provincial departments of education and local schools whose role is to oversee the implementation of new policies in education, (Bantwini & Diko 2011). The study established several reasons for the problem including lack of legislation to back the South African school district officials' operations. District officials felt overwhelmed by the responsibilities of overseeing the schools and guiding teachers. Teachers had their share of challenges in the implementation of the RNCS. They did not have the policy documents even six years after the launch of the RNCS; they had inadequate content knowledge; and there was a weak culture of teaching and learning in most schools (Bantwini & Diko 2011). In Zambia, the CDC has specialists that are required to oversee curriculum implementation. Whether Zambian teachers for SE were trained in curriculum implementation or not was established in this study. It will also determine whether teachers had enough material for teaching and learning the new curriculum as well as whether they had access to the new curriculum document three years after the implementation launch. These were challenges for the South African counterparts that constrained the implementation of the curriculum following the implementation of the RNCS. Such challenges suffocate curriculum implementation elsewhere where they exist.

Apartheid had an influence on the way inclusive education is managed in South Africa. According to Donohue and Bornman (2014), during apartheid, schools were also segregated in terms of disability. Schools for white learners with disabilities were well-funded, whereas support services for learners with disabilities who attended black schools were minimal. However, following the demise of apartheid, compulsory education was implemented for all South African children and segregated schooling practices were eliminated (Donohue and

Bornman 2014). Since 1994, South Africa has made progress toward inclusion of all people including persons with disabilities into their developing democratic nation. According to the Department of Basic Education Report of the Republic of SA (2015), as early as 2001, the inclusive education agenda was already under way in South Africa reflected through the Department of Education White Paper 6 highlighting 'Special Education: building an inclusive education and training system.' For instance, the Department of Basic Education Report of the Republic of SA (2015:8) says:

The White Paper 6 (DOE, 2001) on Special Needs Education commits government to provide access to education to all learners who have a disability and those who experience barriers to learning whether it be economic, social, language, class, behaviour or other barriers.

In South Africa as maybe elsewhere inclusive education is being practiced, the premise undertaken is that all children and even adults regardless of their disabilities have the potential to learn. Thus, the Department of Basic Education (DBE) in South Africa adopted two broad strategies for implementing inclusive education through the national strategy on screening, identification, assessment and support. The strategy emphasised the need for early identification and support and the determination of the nature and level of support required by learners. This strategy was intended to curb the unnecessary placement of learners in special schools. The strategy also provided the roles of parents and teachers in implementing the strategy (Dalton, Mckenzie & Kahonde 2012). The other guideline was to respond to learner diversity in the classroom through curriculum and assessment policy statements thereby providing guidance to school managers and teachers on how to plan to meet the learning needs of learners with diverse needs.

Dalton et al. (2012) applaud the South African inclusive education policy for its ability to provide access to education to persons with disabilities. However, this is not to say South Africa does not face any challenges in the implementation of inclusive education. Dalton et al. (2012) lament that the policy of inclusive schooling is frustrated by the lack of teacher skills in adapting the curriculum to meet the learning needs of learners with disabilities. They further lament that the implementation of the inclusive education policy is slow and only partial. The issue of curriculum differentiation is fundamental to the implementation of inclusive education. They advocate for the Universal Design Learning (UDL) that it conceptualises and addresses the need for more flexible curriculum designed to lower the barriers and to enable learners with varying needs to be included in the learning process. Further, Donohue and Bornman (2014) argue that the implementation of inclusive education

in South Africa is still characterised by learners with disabilities being placed in special schools. They argue that the lack of any significant movement on inclusive policy is due to lack of clear policies and poor policies in implementation. Inadequate funding, vague guidelines and ambiguous incentives and directives given to teachers are part of the reasons for the poor inclusive education implementation. Jiyane, Fombad and Mugwisi (2016:3) note that, “although the South African Schools Act (No.84) of 1996 provides for a system that encourages inclusive education and lifelong learning, it is vague and ambiguous regarding the provision of school libraries, for example”.

The same questions arise in the Zambian context. The new curriculum requires teachers to be able to adapt the curriculum to the needs of LSENs. One of the questions considered is: Are teachers for SE trained on how to adapt the curriculum to the different levels of LSENs? And even if they were, do they have the necessary tools for adapting the curriculum or even differentiating it? By tools here, I mean knowledge, skills and materials necessary to help translate the curriculum to the different levels of LSENs without necessarily disadvantaging them in the attainment of the set national goals.

The country reviewed in the next section is Kenya. Kenya places an East African touch on curriculum reforms and implementation and provides a context worth reflecting on as this study progresses.

2.5.5 Kenya

Kenya, an East African country was colonised by Britain and attained its independence in 1963. Like many another colonised African countries, Kenya has a history of missionary pre-colonial education. Nothing is particularly different about Kenya with regard to the colonial curriculum which was synonymous with teaching of apprenticeship skills and the teaching of the Bible to convert people to Christianity. Cheserek and Mugalavai (2012) report that, after independence a committee was formed to collect people’s views and reform the post-independence curriculum in 1964. The committee recommended a curriculum that would “foster national unity and create human resources and development” (Cheserek & Mugalavai 2012).

From 1984, Kenya introduced crucial reforms in education to respond to the country’s political, social and economic needs. The country replaced the 7-4-2-3 system of education with an 8-4-4 structure introducing a curriculum characterised by prevocational skills and

technical education (Cheserek & Mugalavai 2012; MoE, Kenya 2008; Muricho & Chang'ach 2013). The system was meant to prepare learners for formal employment and make them self-reliant. According to Cheserek and Mugalavai (2012), in 1984, the Mackay report recommended an education system that would foster nationalism, patriotism; promote national unity, socio-economic development, sound moral/religious values, individual development and self-fulfillment, social equality and responsibility, technological and industrial skills for the country's development; and promote respect for and development of Kenya's rich and varied cultures among other recommendations.

Another report, "the Keoch report of 2000 recommended integration of total quality in education and training; which became too expensive to implement. The government managed only to rationalise the curriculum in line with national needs and international markets" (Cheserek & Mugalavai 2012: 471). These were reports that reflected what the government believed the Kenyans needed and teachers' participation in the reform ignored a tradition of involvement cultivated as far back as independence. To hear that key participants in curriculum reforms are ignored in an era when democratic virtues are being advocated for is alarming.

But between 2000 and 2005, the prevocational skills curriculum was replaced by a reform that introduced early childhood education, an 8-4-4 education system, SE needs, adult and basic education and non-formal education (Kenya MoE 2008). A major policy intervention was the introduction of free primary education in January 2003 by the government. By 2008, Kenya had introduced free, day, secondary education in its efforts to meet the Millennium Development Goals on UPE of 2000 and the education for all stated in the Jomtien Declaration, 1990 (Kamunge 2008, cited in Cheserek & Mugalavai 2012:471).

The management of education in Kenya was decentralised so that the MoE disperses funds directly to school accounts creating greater ownership for school managers and the community. It was believed that through such kind of support, many vulnerable people in need of education including the disabled would benefit from the resources at local level. The Ministry had the function of ensuring accountability for the resources at school level and monitoring and evaluating standards, quality assurance and capacity building for its officers.

The concept of inclusive education in Kenya is embrative of children, youths and adults in need. Inclusive education does not only target children with SEN, an understanding close to that of Nigeria. As a fundamental right considered in Kenya, quality free education is said to

be provided to all learners in public schools with an alternative secondary curriculum developed for learners who attend non-formal schools (Kenyan MoE 2008).

However, not all goes well in every country where crucial reforms have taken place. Some sections of society feel that things should have been done another way. Crucial for curriculum development is consensus building, acceptance and ownership of the curriculum product. Muricho and Chang'ach (2013) criticised the change of the Kenyan education system from 7-4-2-3 to 8-4-4 as a top-down product which they claimed lacked participation by lower local levels, hence their failure to support it. Muricho and Chang'ach (2013) lament that the challenge of the top-down strategy is that the decisions made at the top of the system are often remote from the ground and relatively insensitive to some of the realities of the local school and classroom situations. In many cases leaders may not be aware of what is happening on the ground. There is need to consult teachers, community or local people who may be familiar with the structure and nature of the problem and their input may be required in making a decision. Further, Bonyo (2012) provides a critique of the Kenyan education reform system and task-forces appointed to reform the education as neglecting grassroots input into proposed changes that all commissions made. He states that, although public submissions were convened at three different levels, children, youths and other stakeholders could not make submissions, let alone district education teams, NGOs and civil society organisations. A further critique by Njeng'ere (2010) observed a wider gap between the intended, implemented and achieved curriculum. Thus, the Kenyan curriculum faces challenges in implementation because of increased enrolments in schools and the limited access to secondary and tertiary education institutions. The curriculum is considered to be examination-oriented because what is taught is what should be tested. Njeng'ere (2010) notes that, despite having a curriculum that is intended to foster national cohesion and integration, the type of knowledge, skills and attitudes that would foster it may not necessarily be tested in a formal examination, hence many schools ignore such initiatives. To make matters worse, despite introducing a new curriculum, materials for implementation were not provided:

for example, although the Life Skills Education (LSE) syllabuses were issued to schools in 2008, to date, very few teachers have been oriented on the contents and methodology of teaching the subject. Consequently, the few who venture to teach LSE find it difficult to achieve the intended objectives (Njeng'ere, 2010:9).

These are some of the woes of curriculum implementation across the world. The curriculum scope and content become more appealing than the implementation. This study intends to establish whether Zambian teachers for SE were trained on the new curriculum and indeed whether they have the necessary materials for implementation.

There seem to be a general concern among African countries on the top-down strategies on curriculum reforms. This feature is reflective of the Nigerian, South African and the Kenyan system. It could be something to do with the nature of historical leadership. This could be an assumption but worth investigating. Does colonialism have an impact on the leadership styles of the nations they colonised? If all authority is tapped from the top, the grassroots is only commanded to do what the top says. This is against democracy and if such is the case, even the nature of a curriculum would be influenced from the top. Such a curriculum then does not reflect the people's inspirations. Implementation of such a document becomes highly problematic.

2.5.6 Zambia

Zambia is a young democracy in the Southern African region. She has a steadily-growing education system that is striving to be in tandem with international expectations. This can be seen from her being a signatory to many progressive conventions on education such as the United Nations Convention on Rights of the Child, the African Charter on rights and welfare of the child and the international covenant on economic, social and culture among others (Beyani 2013; Zambia Civic Education Association [ZCEA] 2008).

Since independence in 1964, Zambia has made progressive attempts to improve her education system. In 1966, the first Education Act was passed though it did not address issues of SE (MoE 1977). In 1977, the first education reforms included issues of SE with special decrees from the first president of Zambia Dr Kenneth Kaunda to establish a college for the handicapped at the now Zambia Institute of SE (ZAMISE). The first education reforms dubbed "Proposals and recommendations" emphasised positive discrimination to favour LSEs. Inter-ministerial cooperation was emphasised so that children could be assessed early at hospitals. Since the responsibility for SE was shifted from the Ministry of Social Welfare, the Ministry of Education after 1977 was tasked to develop SE curricula and teaching material; prescribe suitable building specifications for LSEs; and provide professional supervision of SE (MoE 1977). Categories for LSEs that were considered were the VI, HI, physically-disabled and mentally-retarded. SE from the late 1970s to early 1990s was offered

through special schools, units, hospital units and community rehabilitation centres. Teachers who taught LSENs were trained at LUCOTEHA, now ZAMISE. Teachers specialised in one category and were awarded a teaching certificate to teach LSENs in special schools, units and other provisions. However, Carmody (2004:78) says “training of teachers in this area was problematic and even then, such teachers were not seen to be on the same footing as other teachers. As a result, it was recommended that SE should be part of teacher training course for all teachers”. This demonstrates the negative attitudes toward SE and not only toward disability. The policy to include SE as a course in all teacher education institutions led to ZATEC programmes of teacher training including a component of SE in education studies. Currently, the National Curriculum Framework (NCF) demonstrates a more proactive inclusion of SE as an independent course in all teacher education institutions to be taken by all students.

In 1992, another reform in education was conducted. The Focus on Learning 1992 education document proposed the introduction of pre-service training in SE, the introduction of SE at preschool level and establishing of SE structure at the MoE. According to the MoE (1992: 82), “every child has the right to education. The right is not limited by any disability, physical or mental, from which the child may suffer”. This policy encouraged schools to teach learners with various needs such as those with limb or movement problems, slow learners, learners with speech or language deficits, those with behavioural problems, partial and full deafness, the blind, those with moderate or severe mental impairments and any combinations of the disabilities in an integrated setting. The need to make infrastructure disability-friendly was also echoed in this policy. Existing schools were recommended for rehabilitation to meet the needs of all learners including those with mobility problems (MoE 1992). This policy was an improvement on the 1977 Proposals and Recommendation.

In 1996, Zambia made a landmark decision to change the face of SE in the country. First, she was represented at the Salamanca conference of 7-10th June 1994 in Spain. The main objective of this conference was to further education for all through inclusive education. Reaffirming the right to education of every individual, as enshrined in the 1948 Universal Declaration of Human Rights, and renewing the pledge made by the world community at the 1990 World Conference on Education for All to ensure rights for all regardless of individual differences, Zambia in 1996 introduced a policy that embraced SE from an inclusive perspective. The MoE (1996) mission statement reflected in the 1996 Educating our Future education policy document commits itself to providing quality education to all regardless of

race, disability, dignity, gender, religion ethnic origin and any other characteristics that discriminate human beings. According to MoE (1996: 69), there were three key statements specifically meant to address SE in Zambia:

- a. The Ministry will ensure equality of educational opportunities to LSEN.
- b. The Ministry will provide education of particularly good quality to pupils with SE needs.
- c. The Ministry will improve and strengthen the supervision and management of SE across the country.

These three key statements were backed with strategies for meeting them. Apart from inter-ministerial collaboration which was also recommended in the 1977 reforms and the integration suggested in the 1992 policy, the policy went further to propose the decentralisation of services for LSENs. Thus assessment and identification would be done at local level. The policy encouraged inclusive education perhaps understood as integration: “to the greatest extent possible, the Ministry will integrate pupils with SEN into mainstream institutions and will provide them with necessary facilities” (MoE 1996: 69). This, however, did not mean abolishing special schools. The policy further stated that special schools would still be in place to provide education services for learners who could not benefit from integration as a result of severe disabilities. Another strategy in the 1996 policy is the training of enough SE teachers. The emphasis here seems to be on quantity although the Ministry made progress by introducing a degree course in SE at the UNZA in 1996. Another very important strategy addressed in this policy is the development of appropriate support technology systems and the decentralisation of the SE inspectorate (Education Standards Officers [ESOs]) (MoE 1996). The MoE is thus aware of the need for appropriate curriculum implementation. Whether these pronouncements have been met is the focus of this study.

The 1996 Educating Our Future education policy was one of the drivers that informed the review of the curriculum which is reflected in the 2013 curriculum framework. (MESVTEE 2013a; Tuchili & Kalirani 2014). With special reference to SE, the new curriculum which was first implemented in 2014, has made a number of adjustments guiding the education of LSENs.

- The categories of SEN include the hearing-, visually-, physically-, or intellectually-impaired as well as gifted/talented learners.
- Children with SE needs will require an adapted curriculum and adapted technology.

- Learners with severe disabilities and the intellectually impaired, who can not benefit from the inclusive curriculum will have an alternative curriculum to suit their needs.
- Sign language and braille have been introduced for LSENs to promote literacy and language competences at primary school level.
- All student teachers should be exposed to adequate knowledge and skills in Sign Language and braille.
- All teacher training institutions will provide specialised training in different categories of SE and colleges of education will offer basic SE to students. (MESVTEE 2013a).

However, the progressive policies seem to have been operating without legal backing. There has been no legislation since 1966 when the first Education Act was enacted. ZCEA (2008) noted that the right of the child to education is not included in Zambian law and therefore the progressive child rights reflected in national policies such as Educating Our Future, Free Basic Education and others may not be realised because they have no legal backing, which means that the government is not obligated to fully comply with the rights of the child in budget formulation and implementation. Without an act guiding the running of SE in the country, it is difficult to hold anyone responsible for failed education. But could this be one of the reasons for challenges in curriculum implementation? Laws protect citizens and especially the vulnerable persons in society. Laws guiding education in a country are crucial as has been observed in the cases of Finland and Netherlands. Nations face the obligations to meet the needs of those the laws are intended to protect. However, many reasons may be behind the failure by developing countries to enact laws that protect the underprivileged in society. Among the major reasons are macro-economic factors such as poverty. In some developed countries such as the United States of America (USA) and Finland, the individualised education plan is a constitutional issue. According to Kirk, et al (2009), referring to the Individuals with Disabilities Education Act (IDEA) 2004 (in the USA), each child with disabilities should have his or her own individualised plan according to his or her needs. The individualised education programme (IEP) must include plans for use of assistive technology and short-term objectives for children with disabilities who take alternative assessments.

However, some progress toward enacting the laws that protects children's rights to education have been made. Beyani (2013) notes that the new Zambian Education Act of 2011 provides every person with the right to early childhood care and development and education as well as basic education including literacy education and high school education. According to Beyani

(2013), the act also guides authorities to ensure equality of education for children with SEN and promote affirmative action in relation to this category of learners by identifying, diagnosing, assessing and placing them appropriately.

Much as progress has been recorded, Zambia still has a lot to learn from the international community. For instance, the decentralisation of the ministry of education structures which brought in ESOs at provincial and district levels is not enough. Schools need the autonomy to run education and implement the curriculum according to the contexts in which they are found. This, according to literature has worked well in Finland. Zambia still needs to broaden the understanding of the concept of inclusive education and special needs beyond children with disabilities to meeting the needs of other vulnerable groups as has been observed under Nigeria and Kenya. This will help realise the ‘Leave No One Behind’ slogan aimed at promoting an inclusive society. Denying some groups of people access to education and particularly to the curriculum is tantamount to social, economic and political exclusion. The UN (2016) report on the World Social Situation focuses on the 2030 agenda on inclusiveness underscoring the need to identify who is being left behind and in what ways (UN 2016). This study is one of those studies along the fight for meaningful inclusion and the study of curriculum becomes the best conduit. Interestingly similar to the Netherlands is Zambia’s recognition that special education can be provided in both special and inclusive schools. Zambia may not have reached the concept of fully inclusive schools. The Top-Down model of curriculum development seems to form the base for all countries. Although Finland and the Nordic countries have a decentralised system of education and curriculum development, they equally started with the Top Down model. For instance, the Finish National Board decided the national curriculum in the 70s. African countries such as South Africa, Nigeria, Kenya, and Zambia may not be very different from each other as literature shows a top down influence to date. The scenario is however expected to change with intensification of studies such as this that help to drive policy change.

2.6 STRATEGIES FOR CURRICULUM IMPLEMENTATION IN SE

The success of any curriculum implementation calls for several effective strategies. Reliance on one or two strategies may bring the implementation process to a halt. The section below reviews the strategies that help curriculum implementation.

2.6.1 Curriculum Adaptations and Modifications for LSENs

The concepts of adaptive and alternative curriculum offer LSENs access to education. Failure to adapt a curriculum denies learners their right to education. The MoE should provide access to all children including those with SEN. According to MESVTEE (2013a:21):

children with SEN will require adapted curriculum and adapted technology relevant to their disabilities. However, learners with intellectual impairments as well as others with severe disabilities who cannot benefit from the inclusive curriculum will have an alternative curriculum that suits their needs and abilities. Such learners will be sent to SE units and schools.

Literature supports curriculum alternatives and adaptations to provide education to LSENs (Beveridge 1999; Buli-Holmberg, Nilsen & Skjen 2014; Pierangelo & Giuliani 2008). Many countries in the world today want to be associated with inclusive education. The Norwegian Education Act states that education shall be adapted to the abilities and aptitudes of individual pupils (Buli-Holmberg et al. 2014). Norway in this case practises individually-adapted education, a principle applied in an inclusive context and applying to all pupils. This means teaching must be differentiated according to the diversity of the pupil community although Buli-Holmberg et al. (2014:47) point out that “SE entails a more extensive adaptation than that normally provided for in ordinary education with regard to the input of resources and expertise as well as differentiation of content”. Pierangelo and Giuliani (2008) say adaptation, especially for LSENs, takes into consideration several factors which include a combined set of teaching strategies, flexible scheduling, individualised instruction, mastery learning, large and small-group instruction, individualised tutorials, and cooperative learning. Mitchell (2008) identified four alternatives to curriculum accessibility: accommodations (computer responses instead of oral responses); substitution (e.g. braille for written works); omission (e.g. omitting very complex work); compensation (e.g. self-care, vocational skills); all related to content, teaching materials and the responses expected from learners. According to Pierangelo and Giuliani (2008), curriculum adaptation is vital if learners with disabilities are to achieve or surpass the learning outcomes set in the curriculum. These adaptations include environmental adaptations, presentation of material, pace of activities, alternative methods, material adaptation, assistance to students, and adapting the assessment process. Adaptations, according to King-Sears (2001), are a form of modification to the delivery of

instructional methods and intended goals of the students' performance that does not change the content but does slightly change the conceptual difficulty of the curriculum.

Zambia has embraced the philosophy of inclusive education. The 1996 Educating our Future education policy places significance on inclusive education. Inclusive education when defined in the context of SE is the principle that allows learners with disabilities to learn from the same educational facilities with learners without disabilities or with learners whose disabilities do not significantly impact learning from the mainstream classroom. Under inclusive education policy, learners regardless of their different abilities benefit from the same curriculum, teaching and learning resources and teaching methods although modifications need to be made to allow for the learners with disabilities to benefit from the provisions meant to benefit all. This means teachers teaching in inclusive schools should have SE training background. Inclusive schools should also have teaching and learning material adapted to the needs of LSENs. Mitchell (2008:30) observed that, "making appropriate adaptations or modifications to the curriculum is central to inclusive education and is probably the biggest challenge educators face in creating inclusive classrooms". The 2013 curriculum framework (MESVTEE 2013) proposes an adapted curriculum for learners who cannot benefit from the general curriculum. This is highly progressive.

What this study wishes to establish is how teachers are adapting the curriculum to meet the needs of LSENs. Are all the above factors considered, for instance by Pierangelo and Giuliani (2008), taken into consideration? Pierangelo and Giuliani (2008) provide a guideline of what should be adapted for LSENs. Guidelines have been provided, i.e. an adapted curriculum. This is the guide needed by SETs from the general curriculum. However, what was not clear is whether Zambian teachers for SE have such a curriculum document adapted from the general curriculum. If not, what challenges do teachers face? With this particular concept, more teacher effort and time is required rather than simply changing the instructional methods and strategies. The whole issue therefore rests on the teacher to restructure the content and make it slightly less difficult. If this is the perspective, teachers have a greater role to play in CDP and implementation in particular. To achieve the intended goals for learners in an adapted curriculum, teachers have to prepare individualised learning activities for their learners, provide individual homework tasks and assessments, and provide different instructional materials and strategies. The emphasis on individual attention in an adapted curriculum may pose challenges to teachers who operate with a high teacher-pupil ratio. For instance, MESVTEE (2013b:51) provides an approximation of 1:56 teacher-pupil ratio for

grades 1-7 nationally. Further, MESVTEE (2015:31) reported that “pupil teacher ratios still remained high at 56.1 in 2013 having dropped from 58 in 2004 at primary education level. For the 8-9 and 10 -12 levels the rates changed from 25.0 in 2004 to 24.1 and from 19.0 to 36.9 in 2013 respectively”. Large classes pose challenges to quality education provision especially to LSENs in inclusive classrooms.

Beveridge (1999) and Bulli-Holmberg, Nilsen and Skjen (2014) observe that the implementation of a centrally-formulated curriculum is usually a complex process that is largely dependent on the teachers’ interpretations. In Zambia’s case, the absence of an alternative and adapted curriculum means teachers have individual interpretations of how to adapt the curriculum. This may mean LSENs would receive different interpretations of the curriculum. In an individualised, adapted education curriculum, such interpretations may be good but depend on the quality of teachers trained in SE, and the availability of support materials for adapting the curriculum appropriately. On the other hand, teachers may interpret the curriculum differently by lowering the learning expectations. A study by Imsen (2003) on teachers’ practice of inclusive and individually adapted education in Norway revealed major differences between pupils and teachers’ perceptions of the degree to which teaching was adapted to individual pupils’ needs. Other studies by Arnesen (2008) and Dale and Waerness (2003) also show a lack of coherence between what teachers said they do and what is actually done in practice. It is yet to be established by the current study on how curriculum adaptation is done for LSENs. In adaptation, the possibility of providing less work to learners exists because the learning abilities of LSENs cannot be compared to the learning abilities of the so-called normal learners. This means that the syllabus should be spread over time for its coverage. Under a competence-based curriculum, syllabus coverage does not matter much as long as the competences are achieved.

2.6.2 Accommodations

Another concept used to explain the many ways to have LSENs access the curriculum is accommodation. Marshal and Hunt (2012) state that many students with disabilities can learn the same content, the same curriculum, or the same standard as other students, but they need additional support to master that material. Thus, these students need accommodations. Accommodations are required to ensure that learners who are included in the inclusive classroom learn the same content effectively as others though the rate at which the learning takes place may differ. The end result is the achievement of the curriculum goals by both the

learners with disabilities and those without. Marshal and Hunt (2012) define accommodations as a change that helps a student overcome or work around the disability; for example, “allowing a student who has trouble writing, to give answers orally”. Wilson and Blendnick (2011) state that accommodations may change the setting or method of a presentation or response but do not alter the curriculum or learning expectations. This means that there should be necessary materials and other support that learners can benefit from to access the curriculum in the same way as other learners without disabilities do. There is a need to incorporate different types of teaching and learning methods and techniques which would allow access to the curriculum by learners with disabilities. Providing audiovisual materials, projectors, pictorial presentations or modifying any amount of input allows learners with disabilities to access the curriculum with the conceptual level of difficulty remaining the same. Giving extra time to LSENs does not alter the curriculum or expected outcomes in anyway. According to Okumbe and Tsheko (sa), accommodations for VI learners include having brailers, braille paper styluses, enlarged test copies, computers, CCTV, or use of magnifying glasses: all these materials and any other materials that enable learners with VI to learn should be in place in order to have a curriculum well implemented for the effective learning. The philosophy behind the provision of such materials is that the learners with VI, for example, should learn easily and not miss out because of the lack of the materials because they are going to have the same assessment tasks together with their peers so they should learn the same content.

The undeniable fact is that learners with disabilities included in mainstream schools or even those in special schools require more time to master the content than the other learners without disabilities. Thus, an adapted curriculum and necessary accommodations that support the achievement of the curriculum goals should be provided by schools. The idea of an adapted curriculum is reflecting in the 2013 *Zambian Curriculum Framework* but not supported by any law. Muwana and Ostrosky (2014) cite the lack of legislative support affecting the development of education in most Southern African countries including Zambia. The 2012 *Zambia Disability Act* does not clearly state the nature of support that would be provided to persons with disabilities. It says for instance, the minister in consultation with the minister responsible for education will ensure, “that reasonable accommodation of the individual requirements of persons with disabilities is provided”. It also says that the ministers will ensure that persons with disabilities receive the support required within the general education system, to facilitate their effective education and also to ensure that

effective individualised support measures are provided in environments that maximise academic and social development, consistent with the goal of full inclusion. Thus, a knowledge gap exists on how well the curriculum is being adapted to provide quality education to LSENs. A clear statement in the curriculum framework exists stating that the curriculum will be adapted for LSENs and those with severe disabilities will have an alternative curriculum. The adaptations that the curriculum reflects are sign language use and braille. However, there is more to adaptation than just sign language and braille. As has been observed in the literature, there are many adaptations and accommodations that need to be carefully planned for the learners. A gap then exists. What methods, teaching and learning aids, books, assistive devices, assessment strategies, teaching strategies, are being used by SE teachers in Zambia to teach LSENs? How possible is this in a situation with overcrowded classes in over-enrolled inclusive schools?

The use of computers is another accommodation especially for learners who cannot write on their own. The 2013 *Zambian Curriculum Framework* has introduced computers as a subject at junior secondary school level. It also states that computers have been introduced as a new learning area at senior secondary school level though it does not reflect on the subjects and time allocation to be offered at the secondary school level. The role of computers and other ICT devices in teaching and learning of LSENs cannot be ignored in an era where technology is being embraced as a tool for education and development. This curriculum does not identify computers and ICTs as adaptive and accommodative tools for teaching and learning of LSENs. Computers in learning can make learners with visual impairments and other disabilities independent. Howard and Peterson-Karlan (2010), while placing emphasis on the importance of assistive technologies in supporting instruction of students with disabilities, say, “the nature of their disabilities is such that without some type of Assistive Technology (AT) compensatory support they would not have a floor of opportunity to participate and succeed in the curriculum”. AT including computers have been found to help learners with disabilities access the curriculum because the tools help them to accomplish the educational tasks teachers give them (Howard & Peterson-Karlan 2010; Bouck 2010). Kirk et al. (2009:352) report that:

computer technology has advanced to such an extent that special word processing systems can be used to translate written English into graphic finger spelling, signed and written English. The computer enables the student with severe hearing losses to practice both signed and written English.

Computers and other assistive technologies have also been found to be of great help to learners with visual impairments. According to Arnold (2009), computer programs or applications, exist to aid every level of education, from programs that teach simple addition or sentence construction to programs that teach advanced calculus. Anthony (2013) explained that the Job Access to Windows (JAWS) computer program helps a blind person to read, write and interact with the computer. AT can assist people with a wide range of disabilities through text to speech devices, screen readers, reading pens, access to computers and low-tech devices such as pencil grips or lined paper to aid students' reading. Technology can help learners with VI, HI, reading and writing difficulties and even learners with physical disabilities who cannot write for various reasons including motor difficulties. Bouck (2010:91) says, "Technology use in education is just one tool in an educator's toolbox, a tool to assist in educating students in academic, social and functional skills." Though technology has its own limitations, it grants independence in controlling one's own learning and knowledge acquisition and provides greater access and independence to the general curriculum. To Bouck (2010:92) citing Wyer (2001) and Edyburn, Higgins and Boone (2005): "Technology particularly for students with disabilities is viewed as a 'great equalizer'. It is perceived as a means of providing access and opportunity, promoting independence, and encouraging empowerment".

According to MESVTEE (2013a: 21), "children with SEN will require adapted curriculum and adapted technology relevant to their disabilities". However, Mtonga (2013) established the lack of access to computers by VI learners in schools in Zambia. Muzata (2017a) discovered that many students with disabilities training as teachers in Zambia lacked soft skills in the use of ICT compensatory skills including computers especially at Nkrumah University and the Zambia Institute of SE (ZAMISE). Despite introducing computers as a subject in the new curriculum, many ordinary schools have no or inadequate computers in many cases without the necessary accessories and laboratory facilities. The computer curriculum was introduced before teachers were trained to teach computers (Mulenga 2016, MoGE 2015b). It is easier to conclude that the situation maybe worse for LSENs' access to computers. The curriculum needs to recognise assistive technologies as a major accommodation that allows students with disabilities have access to the curriculum. Although technology does not have answers to all problems persons with disabilities face, (Obiakor, et al. 2010), it provides many solutions to the problems they face.

Although Forlin and West (2015) used the term modified curriculum, they support the idea of a modified curriculum in an inclusive school. They suggest that the general curriculum can be used for learners with VI or HI or intellectual disabilities while modifying language arts, English and Physical Education according to the needs of the learners.

Another way of altering the curriculum and making it accessible to LSENs is parallel curriculum. Okumbe and Tsheko (sa), observed that parallel curriculum outcomes or parallel instruction is another form of modification that needs to be considered when designing a modified curriculum for learners with disabilities. The parallel curriculum outcomes or parallel instruction significantly changes the conceptual difficulty of a curriculum. It requires knowledge of the learners' characteristics and abilities in order for them to benefit from parallel curriculum outcomes. Learners who are gifted or talented usually require more advanced work or challenging work meaning that an increase in conceptual difficulty of instruction and application is required. This therefore requires a teacher who is highly intelligent and well-trained to carry out modifications which will suit such learners. Singh (2012) observed that curricula incorporating higher cognitive concepts should be presented by specially-trained teachers. However, even then, such highly-trained teachers should have a guiding document adapted from the general curriculum. As to whether teachers are able to design modified curriculum that suits the learners with disabilities remains to be seen. This study will establish what forms of curriculum alterations are used to allow LSENs to access the general curriculum. Do they have the necessary training in adapting the curriculum for LSENs?

The other important means for helping LSENs access the general curriculum is through the IEP. An IEP is a key tool in the provision of SE (Buli-Holmberg et al. 2014; Hebel & Persitz 2014; Nilsen & Herlofsen 2012; Pierangelo & Giuliani 2008) as it incorporates the goals that the LSENs should meet. Some countries have enshrined the implementation of the IEP in their education acts. The IDEA 2004 requires that students with disabilities have individualised programme plans (IEPs) developed for them (Howard & Peterson-Karlan 2010). The Norwegian Education Act states that education shall be adapted to the abilities and aptitudes of individual pupils and the IEP is widespread practice in Norwegian schools (Buli-Holmberg, et al. 2014). Byers and Rose (2012:10-12) describe the IEP as a programme "focused on enabling a pupil with SEN to make progress in areas of learning that are of direct relevance to the individual". Teachers and IEP team members that put the IEP into practice should plan both short and long term targets depending on the special needs being addressed.

The IEP helps LSENs to have the curriculum tailored to their needs. There are different learners that need individualised programmes to address the specific problems they face. Byers and Rose (2012) identified several areas that need individualised attention for LSENs. These include communication, number skills as applied in daily life, use of information and technology, self-awareness, problem-solving and thinking skills, among many subordinate skills. The implementation of the curriculum to learners on an individual basis would help learners acquire the desired competences. Though not very clear whether it refers to the IEP, the 2012 Zambia Disability Act says the minister will in consultation with the minister responsible for education ensure that effective individualised support measures are provided in environments that maximise academic and social development, consistent with the goal of full inclusion. In order establish whether teachers are adapting the curriculum to meet the learning needs for LSENs, it will be important to examine teachers' use of the IEP as an adaptation strategy for implementing the curriculum. If teachers are not doing so, how are they managing to meet the learners' needs? The need to assess the quality of the IEPs used in Zambian schools for LSENs will need to be conducted to determine this.

Curriculum differentiation is another alternative that aims at providing LSENs access to quality education. Barratt (2008:89), adopting Tomlinson's (2000) definition, defined differentiation as a "way of thinking and learning that values the individual that can be translated into the classroom in many ways". This was interpreted to mean the special educator has a responsibility to know the learning needs and abilities of the children he or she is teaching, thereby adapting or making different the teaching to maximise the learning potential of the child (Barratt 2008). The Zambian Curriculum Framework (2013) says children with intellectual challenges and those with severe disabilities who would not benefit from the general curriculum would be provided with an alternative curriculum. A differentiated curriculum has been supported by many scholars but somehow contradicts the essence of inclusiveness. In an inclusive philosophy, learners with disabilities benefit from the same curriculum. To have access to the general curriculum, modifications and adaptations should be made. For instance, the learners with severe hearing loss may require a curriculum that recognises the development of basic verbal or total communication skills (Barratt 2008). This means teachers need training in sign language. Deliberato and Nunes (2015:86) state that "adapting the school environment to the diversity of students is an important goal, but it is a challenge given the diversity of students with disabilities". LSENs differ in terms of their unique needs. Beveridge (1999:71) proposes a balance in curriculum between the specialised

and the 'normal,' saying, "the appropriate balance between specialised and 'normal' curricular experiences may vary for different pupils, but the principle of maximum possible access to the mainstream curriculum should apply". Beveridge (1999: 71) also observes that it may be difficult to have a balanced curriculum that would incorporate all aspects but suggests that "where special educational aims associated with specific impairments to learning are required, they should be integrated as fully as possible within the general framework of the common curriculum". The challenge has been observed but this does not mean that the general curriculum should be silent or complacent on SE adaptations. Meeting the needs of the different learners depends on various factors which include the quality training the teachers receive. Without adequate and relevant training, it would be difficult for teachers to differentiate the curriculum needs for the different learners with different SE needs.

There are also other factors involved in meeting the learning needs of learners in a differentiated manner. For instance, learners with severe intellectual challenges may not benefit at all from the general curriculum but may need a life-skills-based curriculum and depend entirely on an IEP learning approach. Learners with serious autism may need additional curricular support to teach social and communicative skills in addition to the general curriculum requirements. Deliberato and Nunes (2015) believe that if inclusion is to be real, the general classroom teacher needs to be trained in the use of adaptive resources and strategies to meet the learning needs of LSENs. This means that the curriculum requires more time for certain learners, and less for others like the gifted learners. Wheeler (2015) proposes in-service and pre-service training and ongoing professional training to meet the educational and behavioural support needs of learners with autism. Other factors include the numbers of LSENs in a classroom against the number of teachers, the support resources and the guiding documents such as the curriculum guide for SE needs.

2.7 CHALLENGES OF CURRICULUM IMPLEMENTATION

Unsuccessful implementation of the curriculum has attracted many reasons from different scholars. Tabulawo (2013), Kalimaposo (2010) and Musonda (1999) believe that such inconsistencies especially in curriculum implementation in sub-Saharan Africa are a result of changes engineered by outside donors. Asaaju (2015) argues that unsuccessful implementation in Nigeria is caused by inconsistency in policy, lack of adequate and quality trained manpower, and poor funding among others. However, Igbokwe et al (2014) stress that

most problems for implementing curriculum centre on the lack of involving teachers as implementers for the needed change, and further revealed that, although the 2008 education reform in Nigeria embraced inclusive education, teachers supported the reforms in principle but did not have training, instructional materials and other facilities to implement the change. Igbokwe et al. (2014) observed a missing link in introducing an inclusive curriculum when the curriculum of teacher education institutions did not have a single course in SE that was mandatory for all teachers in inclusive schools. This gap may be new to many countries especially in Africa, but, from a Zambian context, teacher education institutions have integrated SE in their curricula to equip teachers with skills to teach LSENs. The current curriculum emphasises the introduction of SE training for specific disabilities. However, the curriculum reform did not make provision for teacher education institutions to revise their curricula to be in tandem with the school curriculum. This means teachers graduating from these teacher education institutions are not oriented to the revised school curriculum.

Teacher training in curriculum design, development and implementation is crucial. Gorozidi and Papaioannou (2014) assert that the effectiveness of school reform initiatives depends on the quality of teachers and teachers' motivation to participate in training. Recent studies point to the fact that currently teachers do not receive adequate training that meets the requirements of the school curriculum. According to Mulenga and Luangala (2015), final-year trainee teachers on teaching practice failed to answer questions related to the subjects they were training to teach, i.e. English. Mulenga and Luangala (2015) observed that the teachers were not competent to teach secondary school English language skills. Several observations were made that pointed to this failure, and one critical discovery was that the curriculum in teacher training institutions does not teach what the students need to teach in schools. If this is the case, how sure are we that adaptation of the curriculum for LSENs can be prudently implemented by teachers who are ill-trained and not well-prepared for the new curriculum? Teachers in inclusive settings require special training on how to adapt curriculum and on how to make modifications to the general curriculum so that it suits the needs of LSENs. Otherwise, an alternative curriculum would be ideal. Teachers should be involved in planning sessions for curriculum change because then they will be able to suggest materials that are necessary for accommodation and adaptation of the curriculum.

There are several challenges in curriculum implementation. Mkandawire (2010) observed that among the challenges choking curriculum implementation were lack of funding, inadequate teaching and learning materials, inadequate numbers of qualified teachers,

unavailability of school facilities and equipment like classrooms, libraries, resource centres, offices, desks, school halls and other facilities. Akakandelwa and Munsanje (2011) found that learning materials for learners with VI in schools were scarce in areas such as Mathematics, English and Zambian languages and, where there were materials, such materials were not appropriate for learners with VIs. Another challenge noted by Akakandelwa and Munsanje (2011) was that teachers did not know how to use materials for the VI learners. Disparities in the Zambian curriculum change have been observed in that curriculum change is effected without change at teacher-training level. This leaves teacher-training institutions behind. Graduates from these institutions end up going into schools and finding that they have to teach a new curriculum for which they have not been trained.

Further, if teachers are not trained in curriculum implementation, they are likely to fail to understand the demands of the new curriculum. As a result, they would have no sense of ownership and curriculum implementation suffers. The challenge to think about here is: how ready were teachers for the new curriculum implementation and how ready are Zambian teachers for adaptation of the curriculum to meet the needs of learners with disabilities? Are teaching and learning materials available for the new curriculum? Do teachers know how to use the tools provided such as computers as proposed in the new curriculum? A study by Mtonga (2013) revealed that there was a scarcity of computers for the VI learners in schools in Zambia. The study revealed that many learners did not have access to computers and head teachers as school administrators did not have knowledge of how computers could be used to help VI learners, although teachers themselves had some knowledge that computers would help VI learners in writing notes. The 2013 Zambian curriculum which is being implemented currently proposes computers as one of the subject areas to be taught to provide competence in the use of computers by all learners in the country. VI learners and learners with other disabilities are not excluded from this curriculum. The biggest problem is that the curriculum has been implemented without the resources being available. Mudenda & Siwilanji (2017), Kafata (2016) revealed challenges in the implementation of the 2013 curriculum in selected schools in Kitwe town. Challenges included congested classrooms, limited physical facilities, shortage of qualified teachers, and that some learners and teachers did not know the local language of instruction used. Mulenga (2016) established that Zambian schools in Ndola town implemented the 2013 curriculum in which computer studies was introduced with a lot of challenges which included lack of computers and accessories, poor setup of computer laboratories, lack of trained teachers in computer studies and inadequate books among many.

Prior to the launch of the 2013 curriculum, Mtonga (2013) had already established that most schools did not have computers and even if they had, teachers and VI learners did not know how to use them. Teachers did not know how to use computers when they were at college. Most schools in the rural areas have no access to electricity so, even if they had computers, they could not be used.

Further, Muzata (2013b), in a study conducted to establish how the interactive methodologies were being implemented in teaching HI learners about HIV/AIDS, found that teachers were faced with challenges in sign language and lack of materials for teaching and learning. This finding was shared by Muwana and Ostrosky (2014) who found that there was lack of trained teachers with expertise in sign language and braille in Zambian schools making inclusive education a challenge. The lack aggravates the situation for appropriately implementing the curriculum as intended. The study by Mulenga and Luangala (2015) which revealed the gap between students being trained as English-language teachers failing grammar-related questions shows that much needs to be done if learners with disabilities are to benefit from curriculum modification. A Baseline Survey to improve Life Chances for Children with Disabilities in Zambia through Inclusive Education by Chakulimba, Ndhlovu, Tambulukani, Mkandawire and Muzata (2014) revealed that there were many teachers teaching LSENs in inclusive schools that were not trained in SE. Other challenges relate to access because schools do not have computers or portable laptops intended to help learners with disabilities. Even if computers were available, teachers do not know how to use computers themselves and it would be difficult for them to help learners.

The challenges teachers face in relation to curriculum implementation may also relate to the levels of involvement in CDP. Current governance systems demand that democracy is adhered to, to ensure that all stakeholders are part of the governance process. A curriculum shows the direction of education in any country and affects all people in a nation. This direction should be determined democratically because it affects all stakeholders. Advocacy currently should focus on having an inclusive curriculum, a curriculum which reflects the views and aspirations of society. This includes people from all walks of life: the disabled, the rich, the poor, the educated, the uneducated, foreigners, locals, politicians and religious leaders. As long as each one of these stakeholders forms part of the system, the curriculum should meet their needs. However, it has been generally observed that those in higher positions of influence in society bulldoze curriculum reforms through and decide what should be enshrined in the curriculum without any real consultation. In some cases, curriculum

development has been influenced by foreign international interests. However, much as curriculum should meet the global needs so as not to disadvantage the (consumers) learners in a global society, curriculum should, at all costs, be inclusive (UNESCO-IBE 2013).

Lack of involvement of teachers in the process itself negatively affects curriculum implementation. This is because teachers are key stakeholders in the whole process of curriculum development. Taneja (2008:20) argues that “much of the functioning of the curriculum is contributed by teachers and pupils and is not recorded in any textbooks, syllabus or course of study”. This statement attaches great significance to the role teachers play in curriculum implementation, though their contributions have in most cases been hidden. The CDP can face many challenges if not well-planned and especially if it is imposed. In 2001 in Cambodia, the teachers, parents and community were not very satisfied with a curriculum whose process did not involve them, although they later changed their opinions to support the process after positive results were observed (UNESCO-IBE 2013). A study conducted to ascertain teacher involvement at the different stages of the 2003 curriculum change in South Africa reported that teachers were not involved at design stage (Ramparsad 2010). Teachers evaluate the curriculum daily in their planning, teaching and assessment of learners’ progress and they understand the weaknesses of the curriculum; thus, since they have to implement and interpret the curriculum, it is important that they are well-trained to interpret the curriculum correctly. There is a danger in leaving out teachers at any stage because they are the ones that implement the curriculum in the classroom. They should be part of the planning, designing, implementation and evaluation processes. Curriculum developers should ensure that all channels of information dissemination to establish the need for change are used to reach out to all teachers on the need for change. All necessary platforms both electronic and face-to-face should be used to create a platform for teachers to be involved in the process so that no teacher is left behind. Thus, the use of websites, phones, social networks, meeting, symposia, teacher group meetings, and focus groups should be embraced to enhance involvement (UNESCO-IBE 2013).

According to Ndum, Etim and Okey (2015:24), “Curriculum development calls for considerations of the learner, and his characteristics, the teacher who is the actual implementer of the curriculum, the environmental factors, which include the social, economic, political and educational values of the programme”. Though this study may not focus on learners’ involvement in the CDP in Zambia, the role of teachers is acknowledged by several scholars (Nicholus & Nicholus 1978, Ndum et al. 2015; UNESCO-IBE 2013).

Beyond the role of a teacher as a curriculum implementer, he or she is a material developer (UNESCO-IBE 2013). In a study of teacher involvement in curriculum development in Nigeria, Ndum et al. (2015) observed the need for teachers to be informed, trained and involved in curriculum change. They observed the need to involve teachers in the CDP at various levels which include planning, creation, implementation and reflection. Byers and Rose (2012) call the designing stage 'formulation' while the reflective stage is called 'review'. Such involvement creates not only a full understanding of the change as it comes but also ownership on the part of teachers. It should be noted that challenges in curriculum implementation can start with lack of teacher involvement. Teachers can only be innovators if they know, during the various stages of curriculum development, where the weaknesses in their own planning lie. In countries where curriculum development has been decentralised to school level and schools have the mandate to design a curriculum from the main national curriculum, teacher involvement has been recorded as highly successful. Curriculum development at school level takes into consideration the needs of learners as individuals and is appropriate for LSENs. Handler (2010) conducted a study to establish whether teachers were well-trained to be curriculum leaders. He found that, though curriculum leaders are well versed in philosophy, education, research knowledge and experience, in the process of curriculum, training institutions did not prepare teachers to be curriculum leaders.

2.8 CHAPTER SUMMARY

In conclusion, it should be noted that without effective teacher training and involvement in CDP, implementation of the curriculum, not only for LSENs, faces innumerable challenges. The teacher plays a critical role in the curriculum process and his or her involvement at all stages is cardinal to effective curriculum implementation. This literature review has addressed a number of global experiences in curriculum implementation such as lack of training of teachers in curriculum implementation, lack of resources for implementation, lack of teacher involvement in the curriculum process resulting from the top-down practice, poor planning and funding and difficulties in embracing technology among others. It must, however, be noted that the challenges countries face are contextually-related. For instance, while one country adopts an alternative curriculum as a means for providing access to education for LSENs, another country feels this is against inclusion and basic human rights that LSENs are supposed to enjoy. Different countries have different governance systems, laws and political influence, making curriculum development unique to each country. The challenges experienced in developed nations with regard to curriculum development in

education are not the same as those experienced in Africa. Lessons from countries where curriculum development and implementation has been successful are that curriculum development is a highly consultative process that should involve many stakeholders, especially teachers, throughout the process. Empowerment of teachers and schools to drive curriculum change and implementation gives them the sense of respect and ownership for the job they are meant to do.

CHAPTER 3:

THEORETICAL FRAMEWORK

3.1 INTRODUCTION

In the previous chapter, the literature review was presented. The chapter covered description of the types of curriculum, models of curriculum development, the global view of curriculum reforms, and challenges facing curriculum implementation around the globe. This chapter presents the theoretical framework that guides the study. Theoretical frameworks have become a very important component and common norm in research. According to Kombo and Tromp (2013:56), “a theoretical framework is a collection of interrelated ideas based on theories”. Further, they say that a theoretical framework is a reasoned set of propositions, which are derived from and supported by data or evidence. Using theoretical frameworks strengthens research as it helps to make strong connections between the current study and what has been developed already. Research finds a theoretical framework as a backbone or a pole on which to lean on and gain support. Vinz (2015) observes that a theoretical framework provides the scientific justification for an investigation. In this regard, this study does not stand in isolation. It derives its support from several theories and models. However, the Deliberative Curriculum Theory was adopted to guide this study.

3.2 THE DELIBERATIVE CURRICULUM THEORY

This study adopted Kridel’s (2010) theory of curriculum development. Kridel (2010:204) observed that

curriculum development has a component that deals with issues of implementation and deliberation. Good implementation requires the main agents of the curriculum to be in general agreement with the normative tasks at hand and to have resources, time and the insight to complete their work while also understanding that their work is rooted in an ongoing evaluative effort to improve the school experience.

Group deliberation is the emphasis in curriculum development. In this arrangement, participants in the operation of the school are involved in ongoing discussion and debate over what needs to be done. This theory is supported by age old philosophies of curriculum theory propounded by Pinnar (2004), an American philosopher and scholar, and Schwab (1978, 1983). Schwab proposed school-based curriculum development through a deliberative and

inquiry approach. He contended that curriculum revision called for collaborative groups of different disciplines and experiences which include learners, teachers, subject matter and milieu, and the curriculum specialist. The curriculum specialist has a coordinating role while the other groups set their own goals, methods and resources and should not be bound to centralised authorities. Interesting, in Schwab's model, is the combination of stakeholders in CDP. Coming out of this model is that the teacher is acknowledged together with the learner, for whom the content in the curriculum is planned.

Pinnar (2004:249) philosophically explains

The point of public education is not to become 'accountable', forced through 'modes of address to positions of 'gracious submission' to the political and business status quo. The point of public education is to become an individual, a citizen, a human subject engaged with intelligence and passion in the problems and pleasures of his or her life, problems and pleasures bound up with the problems and pleasures of everyone else in the nation, on this planet.

To sum up, every individual, however they may be involved with the curriculum, needs to be engaged intelligently in the development of it. An imposed curriculum does not produce competence in teachers to execute their duties. Should a curriculum be imposed, it denies the teacher the autonomy and flexibility to modify learning especially for LSENs. In an imposed curriculum, teachers feel accountable to some higher authority and not that they are teaching because they are responsible. They teach to satisfy some 'higher god' somewhere. The implication of such a curriculum, (the imposed curriculum) is that there is a connotation of mistrust in the teacher. This threatens quality implementation of the curriculum. Since the teaching of LSENs continuously produces new challenges, experimental curriculum implementation helps teachers to discover weaker areas of the curriculum and recommend patches to such areas. In a restricted curriculum or rather a curriculum that teachers have not been involved in devising, it is difficult to make any modifications unless the owner or the originator is consulted. Such bureaucratic arrangements derail quality education delivery especially for LSENs. The ideal situation is that the originator of the curriculum should be the teacher. In this case, the teacher would be in charge of the decisions that affect and influence the curriculum.

According to UNESCO-IBE (2013:24), "curriculum development is a social debate process that involves different stakeholders in the community at the local, regional and national

levels". Main stakeholders in this social debate and deliberation are expected to talk over issues of concern about the curriculum and if differences occur, debate is regarded as healthy and directed toward a common goal. Among these main stakeholders, in an ideal world, the main CDP participants are teachers. Teachers need to engage in the curriculum debate and digest the rationale for change and what should be involved in the change. Since teachers implement the curriculum, at no level should they be omitted in the process of curriculum development. Carl (2012) observes that teachers' direct involvement in CDP will determine the level of success and such involvement explains the need to be partners and not passengers or onlookers. They are very important decision-makers who should not be ignored in curriculum development. Teachers need to have knowledge and the resources relevant for curriculum implementation. Curriculum should not be made for them so that they responsible only for implementation. This has serious implications for success. The sense of ownership is likely to dwindle as the implementer meets regular challenges. Tyler (2013:126) says "if a school wide program of curriculum reconstruction is undertaken, it is necessary that there is widespread faculty participation". When teachers are engaged in the CDP, they would know what materials to develop for the curriculum designed for the learners. There would be a serious disjuncture if the one who designs the curriculum is someone else, the one who develops teaching and learning materials is another and the one to implement the curriculum is then the teacher. In school curriculum reform, Tyler (2013:126) notes:

unless the objectives are clearly understood by each teacher, unless he is familiar with the kinds of learning experiences that can be used to attain these objectives, and unless he is able to guide the activities of students so that they will get these experiences, the education program will not be an effective instrument for promoting the aims of the school. Hence every teacher needs to participate in curriculum planning at least to the extent of gaining an adequate understanding of these ends and means.

Teachers' active participation in CDP has many advantages for curriculum implementation. Where deliberation prevails, curriculum is becomes connected to the peculiarities of the local situation. Group deliberation also supports democracy and gives the curriculum the benefit of drawing ideas from multiple perspectives. When such a culture is embraced, key players in the CDP would be teachers and they would take ownership of the school curriculum because their part in determining it is identifiable. From this theoretical understanding of curriculum development, the teacher is a critical and crucial stakeholder in CDP. Teachers are at the

centre of not only designing the curriculum but implementing it as well. It therefore calls for teachers' serious involvement in the curriculum process (Kridel 2010).

Furthermore, the strength of a good curriculum relies on evaluation. Evaluation is an activity that checks the strengths and weaknesses of certain practices employed in the implementation process. In many cases, the design may look acceptable. However, gaps may emerge during the implementation period. When teachers are engaged at all stages of CDP, they would be able to provide insight into certain aspects they could have overlooked during the planning stages. Teacher engagement in CDP allows for them to continuously evaluate the curriculum they are implementing. In deliberative curriculum theory, teachers draw "all their effort" together, their "brains and skills" to engage in a debate on what could have gone wrong that affects the quality of education. With the deliberative effort, together, they would come up with suggestions and eventually solutions to identified problems. This would lead to improvement in the curriculum. The challenges in SE call for a deliberative effort to evaluate the curriculum on an ongoing basis and to improve pedagogy.

As has been observed in most African nations, CDP is characterised by a top-down approach. Technocrats drive the change and impose the implementation. Where CDP is viewed as a technocratic process, the curriculum product acts as a manual for instructions written by agents outside the school community and the educational situation. In the Zambian situation, the CDC is by law mandated to drive curriculum change. This is opposed to the centre being a facilitator for change.

In this chapter, the theoretical framework was presented. The theoretical framework used in this study emphasises that curriculum development requires stakeholders to be in agreement, to have resources, time and insight into curriculum implementation. Further, ongoing evaluation is advanced as a very important practice for effective curriculum implementation. The next chapter presents the research design and methodology for this study.

CHAPTER 4:

RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION

The previous chapter presented the theoretical framework guiding this study. The Deliberative Curriculum Theory by Kridel (2010) was explained. This chapter explains the paradigm, approach, designs and methods used to collect data. It further goes to explain how data collected from the field was analysed, the ethical considerations employed and the credibility of the analysed data. De Marrais and Lapan (2004) explain that methodology is used to describe the theory of how inquiry should proceed and that it involves analysis of the principles and procedures in a particular field of inquiry.

4.2 RESEARCH PARADIGM

Research endeavours to understand the world in which we live. There are different angles from which we try to understand the world around us which entails the search for knowledge and the truth. Humans have developed unique philosophies of how they interpret, create and search for knowledge and the truth. Thus, a study is built around a certain philosophy or paradigm. Murkheji and Albon (2015) borrow Bogdan and Biklen's (1998) definition of a paradigm as a loose collection of logically related assumptions, concepts and propositions that orient thinking and research. Willis (2007: 8) considers a paradigm as "a comprehensive belief system, world view, or framework that guides research and practice in a field". According to Khan (2014:298), "a paradigm is a structure or a set of suppositions and ideas that provides a pathway to see what the world looks like when its scientific aspect is related to its assumptions".

Guba and Lincoln (1994) view a paradigm as a basic belief system based on ontological, epistemological and methodological assumptions. To Guba and Lincoln (1994: 107):

a paradigm may be viewed as a set of basic beliefs (or metaphysics) that deals with ultimate or first principles. It represents a world view that defines, for its holder, the nature of the world, the individual's place in it, and the range of possible relationships to that world and its parts, as for example, cosmologies and theologies do.

The explanation of a paradigm from Guba and Lincoln implies that a paradigm simply presents the basic truth which cannot be argued against no matter how good an argument may be because it is based on faith. A further attempt to elucidate a basic truth is to explain it in terms of three fundamental questions; i.e. the ontological question, the epistemological question and the methodological question. When the ontological question is asked, it should provide answers to the nature and form of reality and what is there that can be known. To Pickard (2013), the question of what the nature and form of reality is an ontological question. Thus, Pickard (2013:7) presents the ontological stance about positivist realism that, “belief is tangible, social reality. This reality exists independently of those ‘creating’ the reality. A social reality can exist just as a natural reality exists (water remains water whether someone is swimming in it or not)”. However, critical realism, a branch of ontology presents a view that even though this reality is there, knowing it is always inhibited by imperfections in detecting its nature as a result of human fallibility (Pickard, 2013). Thus, critical realism, the post-positivist branch of ontology provides researchers with the opportunity to wonder what limits the collection of reliable and valid data despite the inevitable limitations of any research. The ontological perspective of interpretivists (relativist) is the belief in multiple, constructed realities that cannot exist outside the social contexts that create them and that realities vary in nature and are time and context bound (Pickard 2013).

When we try to find out the relationships between the one who knows, the would-be knower and what can be known, we are then delving into the epistemological question (Guba & Lincoln 1994). Pickard (2013) and Guba and Lincoln (1994) explain the epistemological question as that which establishes the nature of the relationship between the knower and the known.

The next step about finding out the reality out there lies in the methodological question: “how can the inquirer (would be knower) go about finding out whether he or she believes can be known?” (Guba & Lincoln 1994:108). Thus, in search of truth, not one method may provide all truth.

Therefore, the search for truth is argued from mainly three different traditional perspectives or philosophies namely positivism, interpretivism and critical theory. It must be noted that there are other perspectives beyond the named three which come as a result of failure of positivism. For instance, Johnson and Christensen (2012) say at the beginning of 1990s, many researchers rejected the incompatibility thesis and started advocating for the pragmatic

position of adopting both quantitative and qualitative research studies. Positivism is a term borrowed from philosophy. According to Halfpenny (2015:13), “the term ‘positivist philosophy’ was originally coined by the Parisian Augustin Comte (1798-1857) to describe his systematic reconstruction of the history and development of scientific knowledge”. Positivism from Comte’s perspective is a philosophy which has three parts, namely, a theory of historical development in which improvements in knowledge are both of historical progress and the source of social stability, a theory of knowledge according to which the only kind of sound knowledge available to humankind is that of science, grounded in observation and that it is a unity of science thesis, according to which all sciences can be integrated into a single natural system (Halfpenny 2015). From the positivist perspective, assumptions, concepts and propositions are proven from experiments, quasi-experiments and other methods that are systematically agreed to provide truth that can be proved either by statistical means or scientific observations. In a nutshell, positivism is associated with quantitative research where it is believed that reality is objective and can be ascertained through objective means such as experiments and other methods that are devoid of subjectivity.

The other paradigm, which this study adopted, is interpretivism. Interpretivists do not agree that all truth can be found through the use of proven scientific methods but through the descriptions of human experiences that scientific observations and experiments cannot determine. The environment has an influence on human behaviour and a description of the environment in relation to human behaviour is cardinal to understanding the human being as a whole. Interpretivists use methods such as interviews, observations, and case studies to obtain reality (Willis 2007).

There are therefore strengths in both positivism and interpretivism. Researchers have a choice to choose one paradigm or combine both in a mixed method design. Viewing the world and truth from the two perspectives closes up gaps in one approach by the other. For instance, numbers in themselves can be meaningless if not interpreted. Human interpretations add rigour to quantitative data and researchers must always take this as an advantage in enriching their studies.

This study adopts the critical theory paradigm. Critical theory observes a deficiency in both positivism and interpretivism because they neglect the political and ideological contexts of much educational research. Cohen et al. (2005) observe that the intention of critical theory is not merely to give an account of society and behaviour but to realise a society that is based on

equality and democracy for all its members with the purpose of trying to change situations and perceptions rather than just understanding them.

The critical theory is called the Advocacy or Liberatory Framework. This paradigm uses both qualitative and quantitative methods of data collection. Lodico et al. (2006:9) say, “whereas this type of research usually uses qualitative methods of data collection, it might use quantitative methods constructed in collaboration with participants if these data will help the people achieve social changes in their society”. In explaining the framework, Lodico et al. (2006:8) explain that “there are multiple possible realities that are dependent on social, political, and economic contexts”, further arguing that:

moral value should form the impetus for research and that research should seek to improve the lives of persons who have little social power and have been marginalised by more powerful groups in their societies. In essence, the goal of advocacy or liberatory researchers is liberation through knowledge gathering.

From this perspective, this study was guided by this paradigm because, for a long time, SE has faced challenges related to marginalisation, segregation and stigmatisation, to the extent that provision of social services such as education have become a serious matter of concern. Curriculum development is one such an area where SE comes into consideration. History has shown that persons with disabilities fail to access social amenities such as education partly due to discrimination. Although this study did not take the radical perspective of transformative quality of political and ideological power to influence change through convincing respondents to be revolutionists, the study collected information that recommended strategies for addressing some of the challenges related to curricular for SEN. Thus, curriculum should improve pedagogy for the oppressed through an inclusive curriculum, through a curriculum developed on the principles of deliberation, consultation and on-going evaluation as has been depicted in the theoretical framework.

4.2.1 Justification for Choosing the Critical Theory Paradigm

First, this paradigm is in agreement with the adopted research design. The paradigm allows use of both qualitative and quantitative approaches to a study of a phenomenon. One cannot engage in transformation of ideologies if they do not collect valid data to support the nature of transformation being proposed. According to this paradigm, the use of mixed methods

enriches and strengthens the argument of involvement of SETs in processes such as CDP. Morse and Niehaus (2016:14) claim that:

a mixed method design, if conducted with deliberate care, is a stronger design than the one that uses a single method because the supplemental component enhances validity of the project per se by enriching or expanding our understanding or by verifying our results from another perspective.

Further, this paradigm blends very well with the adopted theory, namely, “the Deliberative Curriculum Theory” of Kridel (2010). If humans are to engage in debates that lead to proactive change, continuous deliberation is cardinal. Transformation may not always be achieved by radical means.

By using the critical theory paradigm, the researcher illuminates the different circumstances human race faces around the globe. We do not live in the same environments though we share the same globe. We share the same globe with different political, social and economic environments, factors that affect human activity from many angles. From the curriculum point of view, the literature for this study discovered that there are countries around the globe where the concept of inclusive education is influenced by political history. However, there are many challenges that some countries within the same regions (such as Africa) may have in common. This study, for instance, has established the top-down influence on curriculum, a concept that Carl (2012) condemned in South Africa as detrimental to the process of taking ownership of the curriculum. Zambia and South Africa share a common history of being colonised and it should take critical theorists to help make a change that would embrace all stakeholders not only in curriculum development but generally in embracing democratic practice in many functional institutions including education. In terms of SE, this theory and indeed this study brings to light the continued injustices against persons perceived to be different. Learners with disabilities from time immemorial have suffered segregation, discrimination, stigmatisation and marginalisation. This study has established that, although the policy of inclusive education is in place in Zambia, teachers who teach LSENs in such schools are not well-supported and not involved in CDP activities. Though teacher respondents in special schools have good knowledge of curriculum adaptation, they are not provided with materials to effectively implement the new curriculum. This is to say, the principle of inclusive education depicted in many education documents, such as Educating

our Future 1996, the Disability Act of 2012, become null and void. They are simply words on paper.

Using this theory, stakeholders need to take proactive measures to address the situation and develop the alternative curriculum, adapted syllabuses and guidelines as well as adapted technologies that the curriculum framework 2013 has indicated as crucial for effective implementation. SE stakeholders need to engage in continuous deliberations, consultations and evaluation of the curriculum for LSENs.

4.3 RESEARCH APPROACH

This study employed a mixed-methods approach to the collection and analysis of data. The mixed-methods approach entails using both qualitative and quantitative data. According to Jones and Bartlett Learning (2017:44), “qualitative research is a systematic, subjective approach used to describe the life experiences and give them meaning”. Khan (2014: 300) defines qualitative research as a systematic and subjective approach to highlight and explain daily life experiences and to further give them meaning. To Khan (2014: 300), “qualitative research allows researchers to deeply explore behaviours, different perspectives, and life experiences to discover the complexities of the situation through a holistic framework”. This study collected data relating to how teachers for SE were implementing the general curriculum to meet the needs of LSENs. Thus, teachers’ experiences provided meaning in a systematic manner to enrich this study.

Quantitative research is the objective form of conducting research where knowledge should be proved by scientific methods and not by feelings, opinions, values and personal interpretations. Sidhu (2014) says when a researcher gathers data by participant observation, interviews and the examination of documentary materials, little measurement may be involved. According to Kombo and Tromp (2013:11), “quantitative research relies on the principle of verifiability”. Creswell (2013) has explained quantitative research as an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analysed using statistical procedures.

There is no argument that differences between quantitative and qualitative research exist. However, it must also be noted that there are usually overlaps. For instance, qualitative research may use figures, frequencies to describe phenomena. Quantitative research may

quantify opinions. One would argue, “What meaning does quantitative research contribute to the body of knowledge if its figures can not be described?” Keeves (1997), Denzin and Lincoln (2008) and Sidhu (2014) all observe that the difference between qualitative and quantitative research is not easily definable and that the difference lies in the level of abstraction. Qualitative research can still collect numbers that can be described. For numbers to have meaning, they must be described.

Knowing that there are weaknesses and strengths in both quantitative and qualitative research, this study adopted a mixed methods approach. Although this study did not engage in correlational and experimental methods of collecting data, methods synonymous with quantitative research, the study collected verifiable amounts of data that were analysed using the Statistical Package for Social Sciences (SPSS). This reinforced the data collected by qualitative means. In this case, triangulation became crucial in strengthening the data collection process and overcoming researcher bias. Researcher bias is a known threat to data validity and reliability and if overcome through the use of mixed methods, the research results become dependable. Bias in research is said to be more likely to occur in qualitative research where the researcher may have the autonomy for interpretations based on his or her experience. When mixed methods is used, the quantitative part of the data would keep checks on the qualitative data. If a higher degree of variations occur, the researcher may use the flexibility feature embedded in qualitative research to verify the data collected by revisiting the participants.

In this study, this approach combined “the strengths of both qualitative and quantitative research, providing both an in-depth look at the context, processes and interactions and precise measurement of attitudes and outcomes” (Lodico et al., 2006:282). When this study was conducted, teachers answered questionnaires first before a few selected ones were observed in teaching and post-lesson discussions were held. ESOs and CSs were also interviewed during the same period of data collection.

The use of mixed methods is becoming the most popular approach to research in recent times. This is because of the ontological versus epistemological views of reality. It is no longer easy to obtain satisfaction or belief in results of a study that uses one approach. This is because both quantitative and qualitative research have weaknesses. According to Creswell (2014b:15), the choice to use mixed methods may arise “when the use of quantitative or qualitative research alone is insufficient for gaining an understanding of the problem”. To

understand curriculum implementation in this, it was imperative to understand key stakeholder involvement (SETs) and the best way to understand their involvement should not be limited to ‘yes’ and ‘no’ responses or establishing relationships that do not show the cause (quantitative). It is important to understand the details of their not being involved and the challenges that come with lack or with involvement. In this case, using one approach would not help to understand the problem. Creswell (2014b:15) wrote,

Using only one method may be insufficient because of the inherent weaknesses of each approach. Quantitative research does not adequately investigate personal stories and meanings or deeply probe the perspectives of individuals. Qualitative research does not allow us to generalize from a small group to a large population.

Consequently, the ultimate aim of research is to discover truth. Truth must be felt through what participants experience and say. Such perceived truth can even gain momentum and create action change when it is generalizable to the larger population. Once the researcher is convinced that a particular problem can best be understood objective and subjective reality, solutions can easily be sought to solve the problem. In this study for instance, if stakeholders feel they are not involved, they must explain the impact of none involvement on curriculum implementation and suggest action oriented solutions to the problems. Mixed method approach helps to understand a problem thoroughly and not partially. In studies regarding the marginalised in society, the disabled inclusive, an entire problem identified needs to be understood for once. Perhaps, while it may be expensive and time consuming to carry out mixed method studies, the economic returns maybe higher. There would not be need to conduct several other studies to ascertain the cause of a problem when one or two mixed studies have disseminated concrete results. Resources would rather be directed towards solving the problem.

For a study like this one that has adopted the deliberative curriculum theory, data from different angles needs to talk to each other. Data should be seen to agree and disagree on a problem under investigation. Thus the methods (methodological triangulation) are engaged in constant interaction and finally converge to agree on the final finding (conclusion).

Further, the adoption of the critical theory as a paradigm of lens for his study, mixed methods gains the ground to utilise its data for transformation and advocacy. Society must be seen to change and has been changing when informed by research. Advocacy is a good basis for transformation.

Agreeing with Bergman's (2008) compilation of purposes of mixed methods as viewed by different scholars, this study adopted this approach based on principles of complementarity, completeness, expansion, corroboration, compensation and diversity. The developmental purpose of mixed methods approach was not applicable because this study did not use sequential mixed methods approach where it is more applicable (Bergman's 2008). This study adopted the convergent parallel mixed methods.

4.4 RESEARCH DESIGN

Mixed methods have their own designs, usually designs that satisfy two different sets of data; quantitative and qualitative. Fraenkel, Wallen & Hyun, (2012) describe three major mixed method designs as explanatory, exploratory and triangulation designs. Perhaps as a matter of use of different terms to describe the same designs, Creswell (2014a), also came up with three mixed methods designs namely the concurrent mixed methods design, the explanatory sequential mixed design and the exploratory sequential mixed methods design. The designs are explained in terms of which one influences the other or whether they the researcher uses the two approaches on an equal basis.

In the exploratory design, "researchers first use a qualitative method to discover the important variables underlying a phenomenon of interest and to inform a second, quantitative, method." When this design is chosen, qualitative results give direction to quantitative results. Thus, the quantitative results help to validate or extend the qualitative findings (Fraenkel, Wallen & Hyun 2012), (Creswell 2014a).

When a researcher adopts the explanatory design, quantitative method is preferred first. The qualitative method is used as follow up and as refining tool for quantitative results. Creswell (2014a) contests that this design is more appealing to individuals or researchers with good background in quantitative research or from fields that are new to qualitative approach. In an explanatory research design, qualitative data supports the quantitative research results. Analysis of the two sets of data is done separately.

The 3rd type of mixed methods design is called the triangulation design ((Fraenkel, Wallen & Hyun 2012) or the convergent parallel mixed methods (Creswell 2014a). Two different terms have been used by the two different authors but the explanation is the same. Fraenkel, Wallen & Hyun (2012:561) explain that;

In the triangulation design, the researcher uses both quantitative and qualitative methods to study the same phenomenon to determine if the two converge upon a single understanding of the research problem being investigated. If they do not, then the researcher must explore why the two methods provide different pictures. Quantitative and qualitative methods are given equal priority, and all data are collected simultaneously

Creswell (2014a) says this is the most commonly used mixed methods design in which quantitative and qualitative data are collected and analysed separately but results and findings compared to see possibilities of confirmation or disconfirmation of the results.

Creswell (2014a:n.p) explains;

The key assumption of this approach is that both qualitative and quantitative data provide different types of information- often detailed views of participants qualitatively and scores on instruments quantitatively – and together they yield results that should be the same.

However, there are times when data in convergent mixed methods design can be analysed together. If analysed together, some qualitative data may have to be converted into quantitative by assigning codes for quantitative analysis (Connolly 2007, Fraenkel, Wallen & Hyun 2012:561) or by converting quantitative data into qualitative. Creswell (2014a) calls this transformation. During transformation, the researcher takes the qualitative themes or codes and counts them to form quantitative measures. In this design, the two sets of data operate on equal basis, with each complimenting the other. There are three other mixed method designs that Creswell (2014) outlined. These are the embedded mixed methods, the transformative mixed framework and multiphase mixed methods.

However, this study adopted the convergent parallel mixed methods design. According to Watkins and Gioia (2015:29),

a social researcher will often select a convergent parallel design when he or she needs to obtain a more complete understanding from the qualitative and quantitative data, plans to corroborate results from different methods, or wants to compare multiple levels within a system.

In this study, the researcher considered the problems that could arise from the study results if one method was used. It was therefore important to consider using the convergent mixed methods in order to gain a full understanding of the CDP as it relates to SE in Zambia. The

use of mixed methods helped to check the consistency of responses from different methods. Thus, conclusions based on mixed methods help to provide confidence in the study results.

In using the convergent mixed method design, the study employed the descriptive survey method. A descriptive survey design helps to collect data that describes the state of affairs as it exists. Kombo and Tromp (2013:71) define a descriptive survey as a “method of collecting information by interviewing or administering a questionnaire to a sample of individuals. Descriptive surveys collect information about people’s attitudes, opinions, habits or any other variety of education or social issues”. In this study, teachers were expected to have personal perceptions, opinions and attitudes toward the newly-introduced curriculum in Zambia. Such perceptions, opinions and attitudes could not be established adequately by use of a single method. Questionnaires, interviews and lesson observations supported by post lesson discussions were used to get a full understanding of the curriculum implementation process in Zambia. Questionnaires collected both quantitative and qualitative data while qualitative interviews and observations were conducted. Data from the different instruments were analysed following the convergent parallel design. Conclusions were based on the gravity of the convergence of results.

Using the convergent mixed methods design is more advantages than dependency on one method. In an endeavor to find concrete answers to research questions, the use of mixed methods research provides the best alternative. Heyvaert, Maes & Onghena (2011) argue that “the main advantage of the mixing of findings from qualitative and quantitative primary level articles is that compared to ‘unmixed’ syntheses—more complete, concrete, and nuanced answers can be given to complex research questions.” In this study for instance, it would be misleading to use ESOs alone to determine the level of involvement of SETs in CDP. The research question directed to teachers themselves was cardinal to show whether they were involved or not. This was consolidated through qualitative responses from ESOs and CSs. Studies of this nature require the indulgence of mixed methods to overcome persona interest. For instance, if the researcher relied on a qualitative perspective of the CSs to tell whether special education teachers were involved in the curriculum development process or not, results would have been deceiving and unrepresentative. To protect their own interests and knowing the significance of involving key stakeholders, CSs could easily say they involved all teachers including SETs. But because I used a mixed method design, data was cross checking itself to give concrete answers to the research questions. In other ways mixed methods allows research participants to check themselves, approve and disapprove

themselves. This leads to deductive conclusions about a study. Table 4.4 gives a brief of how the mixed method design helped to enrich this study.

4.5 POPULATION AND SAMPLING

Research is usually defined by its population. Lim and Ting (2012) define a population as a complete group that shares a common set of characteristics. Sidhu (2014:253) elaborated that a “population is an aggregate or totality of objects or individuals regarding which inferences are to be made in a sampling study. It means all those people or documents, etc who are proposed to be covered under the same scheme of study”. Ghosh (2015) called this a universe in statistical inquiry. From these definitions, one crucial aspect worth noting is that of characteristics of a population. Thus, the group of objects or people from which a researcher selects a sample should have similar characteristics so that the researcher can draw conclusions that represent that group (population). In this study, the study population comprised teachers for LSENs, ESOs for SE and CS for SE. The common attribute for the population is that they are all specialists, performing different duties for LSENs. They are all grounded in theory, skills and pedagogy of LSENs. The CS designs curriculum for teachers for LSENs to teach and the ESOs check the standard of the implementation of the curriculum.

4.5.1 Sampling Procedures

Where mixed methods design is used as in the case of this study, a consideration for sampling procedures that satisfy both quantitative and qualitative designs should apply. According to Riazi (2016:228), “when parallel or concurrent designs are used for a triangulation purpose, then quantitative and qualitative results and inferences will be integrated to make a meta-inference about how the findings from one strand converges with and corroborates the findings from the other strand”. This study employed a mixed-methods design and therefore employed a mixed sampling procedure of random and purposive sampling. These procedures are meant to collect different but complementary data.

According to Onwuegbuzie and Collins (2007:281), “sampling decisions are typically more complicated in mixed methods research because sampling schemes must be designed for both the qualitative and quantitative research components of these studies”. They indicate that random sampling is common in quantitative studies and non-random sampling in qualitative studies.

4.5.1.1 Random sampling

Random sampling was used in this study which meant that every respondent eligible had an equal chance of being selected (Kombo & Tromp 2013; Onwuegbuzie & Collins 2007; Sidhu 2014). Thus, before the study, everyone is only a potential respondent (Ghosh 2015; Lim & Ting, 2012; Murkheji 2015; Sidhu 2014). They all stand at zero probability. Lim and Ting (2012:8) say “using a random sampling technique, every element in the population has a known, nonzero probability of being selected into the sample”. This means that the researcher would not necessarily wish to target specific respondents but accord every teacher teaching LSENs an opportunity to answer a questionnaire in special and inclusive schools. The researcher from the onset had no prior knowledge of which SETs would answer the questionnaires. Known types of random sampling techniques that help to avoid bias are the lottery method, Tippet’s numbers, Grid system and selection from a sequential list (Ghosh 2015). The researcher used the lottery method in schools where there were many respondents. It was more convenient to avoid bias by respondents selecting numbers “out of a hat” to indicate their selection for the study. This part only applied when administering questionnaires to teachers.

4.5.1.2 Non-probability sampling

Purposive or non-probability sampling was also applied. According to Fraenkel and Wallen (2003:440), qualitative researchers are likely to choose purposive sampling to yield the best understanding of whatever they wish to study. Purposive sampling is known to be very useful in qualitative research because of the detailed descriptions of data it brings from the field. Lodico et al. (2010:134) say the goal of purposive sampling is not to obtain a large and representative sample; the goal is to select persons, places, or things that can provide the richest and most detailed information that can help us answer the research questions. For instance, there are ESOs who are not responsible for SE and they were not required in this study. Equally, the CSs targeted were purposively selected from within the area of SE.

Hair, Celsi, Money, Samouel and Page (2011:175) define purposive sampling (also called judgemental sampling), as “a type of sampling which involves selecting elements in the sample for a specific purpose. Thus, the researcher uses his or her judgement to select the respondents”. This type of sampling provides the researcher with the target from which to collect intended data, hence the researcher can manage data collection in time and at low

cost. In studies where the researcher feels there is a critical need for key respondents, such sampling is crucial in collecting the desired data.

Thus the ESOs and CS were purposefully selected because the researcher knew they had the information. In this case, critical case sampling was chosen because the respondents were critical cases that could contribute the most useful information for the study (Kombo & Tromp 2013, Fraenkel & Wallen 2003). Extreme case purposive sampling was also applied to the selection of teachers who were observed in that they were believed to possess rich information and skills because of their expertise in teaching LSENs (Kombo & Tromp 2013; Sidhu, 2014).

Though at a general level, purposive sampling was used to arrive at the choice of respondents as teachers teaching LSENs, actual respondents were selected randomly for the quantitative part. For the qualitative section, the participants (ESO and CS) were purposively selected for interviews. It was assumed that the participants would have the information the researcher wished to obtain by virtue of their positions in the MoGE and SE. These participants were assumed to have qualifications in SE, have the knowledge, skills and experience in not only standards but classroom experience before they became ESOs for SE. It is this type of sampling that enabled the researcher to apply the principle of flexibility in data collection strategies and adhere to advice from some participants who advised the researcher not to involve some ESOs who were recently appointed to their positions. Hence to a minor extent, snowball sampling type of purposive sampling applied. In snowball sampling, one participant is able to recommend another suitable participant. This strategy also applied in one of the provinces where the districts the researcher visited did not have ESOs for SE because such ESOs were based in other far-flung districts making it difficult for them to manage two districts due to administrative costs such as finances and transport. Thus, the researcher was advised to visit another ESO who was from another district where the researcher did not have SETs respondents.

4.5.2 Sample Characteristics

Gosh (2015:230) provides a five-point basis of sampling, two of which are that, “the units or samples selected must have likeness or similarity with units to make the sampling more specific and that the sample should be such that it can represent adequately the whole data”. As alluded to under population, the respondents selected for this study had similar characteristics with a strong background in SE.

The study used a total sample of 134 respondents and participants: 120 respondents were SETs who answered the questionnaires while 12 ESOs and 2 CSs were interviewed. This sample is representative considering what Cohen et al. (2005:93) proposed as a minimum number of respondents for statistical analysis: “a sample of thirty is held by many to be the minimum number of cases if researchers plan to use some form of statistical analysis on their data”. In this regard, 62 teachers were selected from special schools, 39 from inclusive schools, 18 from special units and one from a hospital unit. Twelve (12) teachers were observed and post-lesson discussions were held with them to learn about their experiences in implementing the new curriculum.

Table 4.1 and 4.2 provides a distribution of respondents that were sampled for the study and the characteristics of those that were observed:

Table 4.1

Sample distributions

Province	# Districts Visited	# Schools Visited	# Of Teacher Respondents	ESOs	CS	N
Southern	2	5	40	4		
Lusaka	1	4	40	4	2	
North Western	5	8	40	5		
Total	8	17	120	12	2	134

Note: names of schools and districts have been withheld for ethical reasons

Table 4.2

Teachers observed in classroom

Name	Sex	Classification	School type	Training	Observation
TR 1	Female	No disability	Inclusive	Partially	Discussion
TR 2	Female	No disability	Special school	Specialised	Observation
TR 3	Male	No Disability	Inclusive	Not Specialised	Observation
TR 4	Female	No Disability	Inclusive	Not Specialised	Observation
TR 5	Female	No Disability	Inclusive	Not Specialised	observation
TR 6	Female	No Disability	Inclusive	Partially	Discussion
TR 7	Male	Disabled (deaf)	Special school	Specialised	Observation
TR 8	Female	No Disability	Special school	Specialised	Observation
TR 9	Male	Disabled (VI)	Special school	Specialised	Observation
TR 10	Male	Disabled (deaf)	Special school	Specialised	Discussion
TR 11	Male	No Disability	Special school	Specialised	Discussion
TR 12	Female	No Disability	Inclusive	Not Specialised	Discussion

Note: TR- Teacher

Observations were conducted in special and inclusive schools. This provided a comparative analysis of what is exactly happening in the two forms of education provision for SE in Zambia.

The largest sample for this study was the teachers (120 respondents). The researcher was influenced by the principles of the theory of curriculum deliberation in asking for respondent willingness to participate in answering the questionnaires. With the permission from Permanent Secretary of the Zambian MoGE, the researcher first visited the head of the school for further permission and the heads accorded the researcher an opportunity to first explain his study to the teachers in a staff room. After explaining the significance of the study, the researcher then requested for teachers that were willing to answer the questionnaires. This helped to improve the questionnaire return rate.

4.6 RESEARCH TOOLS AND PROCEDURES FOR DATA COLLECTION

4.6.1 Procedures for Data Collection

This study employed a mixed-methods approach. The study used questionnaires, interviews and an observation checklist. Lesson observations were complemented with discussions with teachers observed in classroom teaching.

4.6.2 Research Instruments

The following section presents research tools used in the collection of data. The research tools were questionnaires, interview guides and an observation checklist.

4.6.2.1 Questionnaires

The main instrument for data collection in this study was the questionnaire. It was used to collect large amounts of data from the largest sample that made up this study (the teachers). Hair et al. (2011: 247) define a questionnaire as a prepared set of questions (or measures) used by respondents or interviewers to record answers (data). A questionnaire generates primary data. According to Mukherji and Albon (2015), questionnaires can help a researcher collect demographic, background data, attitudes, beliefs, opinions, values, years, number of time a phenomenon is measured and human experiences. Researchers acknowledge the usefulness in questionnaires for collecting rich data. Connolly (2007) cautions against designing a questionnaire with many open-ended questions and encourages the use of closed questions for easy quantitative analysis. The questionnaire was therefore designed with more closed than open-ended questions. This is because this was the part of the study that needed to provide quantitative results and allow the researcher to draw conclusions based on numbers about curriculum involvement and subsequent implementation. The few qualitative questions that were incorporated were meant to seek reasons from respondents who may have given a 'YES' or 'NO' and to explain how they could have been involved if they were. There were also a few questions that required respondents to give short answers. Open-ended questions required respondents to give their views, opinions and experiences on the implementation of the revised curriculum to LSENs.

To overcome the possibility of a low response rate, the researcher visited the research sites and distributed the questionnaires in person. He collected them physically from the respondents. However, in North Western Province, the researcher posted the questionnaires

to well-known teachers serving in the special schools and units. All questionnaires were returned. One strategy to improve the return response rate and ensure that the sample remained at the desired number was distributing more questionnaires than the actual number required. Murkheji (2015) acknowledges that before data are analysed, a check through all questionnaire scripts is necessary to remove those that might not have been adequately answered. The researcher used the strategy of having more questionnaires distributed and received to select questionnaires that were fully or substantially answered for data analysis. For instance, the researcher distributed on average six questionnaires above the threshold in each province. This helped especially in certain provinces where some questionnaires could not be returned while the researcher was in the province.

4.6.2.2 Semi-structured interviews

Semi-structured interviews were conducted with CS and ESOs. Visits to their offices and phone calls helped to make prior appointments before interviews were held. Hair et al. (2011: 248) explain that the role of the interviewer should be to explain the survey, motivate the respondent to answer, make sure the participant understands the questions and probe for clarification or elaboration on open-ended questions. The information sheets were distributed before the interviews were conducted to allow the interviewees to understand what the researcher was intending to gather. By the nature of their busy schedules, it was always difficult to find the respondents even on appointed dates but eventually, the interviews were conducted, two of them via phone calls.

The instrument used was the interview guide. Hair et al. (2011:248) explain that an interview guide should specify the topics to cover, the questions to be asked, the sequence or topics and the wording of the questions (which is fixed) but there are no scales for measuring concepts. An interview guide was prepared and administered to CSs and ESOs responsible for SE. The interview had some questions similar to those that were on the questionnaire in order to allow for a comparison of responses and test reliability. ESOs have a responsibility of monitoring education standards in their districts. They evaluate the teaching, the materials and school environment and recommend improvements to the system. In the case of the new curriculum, the interview guide questions focused on their role in CDP and the extent to which they involved teachers for SE at the different stages of curriculum development.

Another interview guide was prepared for CSs at CDC of Zambia. The CDC has a department responsible for developing curricular for SE. The questions emphasised the role of teachers in the CDP and the centre facilitated this process.

Before the interviews, the researcher explained the importance of the research and the ethical considerations. Participants were assured of maximum confidentiality. The researcher used a Sony Digital Voice Recorder to store the data. Participants were advised about the recording and asked whether they agreed to be recorded. After they had signed the consent form, the interviews were conducted. The researcher used probing strategies to get more information especially from participants that had limited ability to explain issues on their own. The researcher also tried to moderate respondents who spoke randomly through praise and focusing on the questions. At the end of each interview, the researcher gave out an evaluation form to evaluate respondents' feelings about how the interview was conducted. This was to help the researcher ascertain whether he collected genuine information or respondents were reluctant to provide information.

4.6.2.3 Teacher observation

To further strengthen the findings of this study, the researcher saw the need to engage observation as an additional method for collecting data. According to Sapsford and Jupp, (2006:58):

as part of research, observation can be used for a variety of purposes. It may be employed in the preliminary stages of a research project to explore an area which can then be studied more fully utilising other methods, or it can be used toward the end of a project to supplement or provide a check on data collected in interviews or surveys.

According to Mukherji and Albon (2015:135), observation can be quantitative or qualitative. “Quantitative observations, sometimes known as structured observations, are designed to give standardised, numerical data, in an effort to reduce the number of variables and improve reliability of the findings”. The other type, qualitative observations are often undertaken for explorative purposes and exactly what will be observed is not specified beforehand. Qualitative observation, according to Johnson and Christensen (2012:238) “involves observing all potentially relevant phenomena and taking extensive field notes without specifying in advance exactly what is to be observed. In other words, qualitative observation is usually done exploratory purposes. It is also usually done in natural settings”. However,

since this study did not adopt either positivism or interpretivism, the type of observation chosen should not have been one that which favours any one of the two opposing paradigms because, then reality as collected through observation would be influenced by the way it is understood in each of them. For instance, if the researcher adopted structured observations, it would mean the researcher is using positivist ideas that that reality is understood from structured scientific format. To this end, Sapsford and Jupp (2006:58, 62) explain:

research in this tradition has generally rejected the positivist approach to social science and has stressed that, to understand human behaviour, we need to explore the social meanings that underpin it. It has emphasised studying the perspectives of social actors – their ideas, attitudes, motives and intentions, and the way they interpret the social world – as well as observation of behaviour in natural situations and in its cultural context.

Teacher observations in classroom teaching were thus carried out in selected special and inclusive schools to see how teachers were implementing the new curriculum. The researcher explained the purpose of the observation and its relevance to the teachers and those that agreed to be observed signed the consent form. Some participants however declined to be observed for various reasons but were willing to discuss their approaches with the researcher. All post-lesson discussions were recorded in a Sony Digital MP3 voice recorder. Respondents agreed to being recorded before the discussion started.

An observation instrument was designed to collect data directly from teachers by seeing them teaching and having post lesson discussions about their experiences with the revised curriculum. Using the convergent parallel mixed methods design, the researcher conducted observations at the same time as the questionnaires were answered. Thus, after the distribution of questionnaires, the researcher arranged for an observation with teachers who were willing to be observed and to share their experiences with the researcher on the implementation of the revised curriculum. According to Mukherji and Albon (2015:135), observation can be quantitative or qualitative. “Quantitative observations, sometimes known as structured observations, are designed to give standardised, numerical data, in an effort to reduce the number of variables and improve reliability of the findings”. Qualitative observations are often undertaken for explorative purposes and exactly what will be observed is not specified beforehand. Qualitative observations are usually undertaken in naturalistic situations where the researcher, guided by the overall aim of the research, records interesting things that they see at the time (Mukherji & Albon 2015). This study used both quantitative and qualitative observation. An observation checklist was used to check the qualities teachers

exhibited in teaching and qualities were added when observed. Hair et al. (2011:248) observe that while the initial structure of an observation guide is based on a conceptual framework for the research, it may expand to include new information that emerges during the data collection process. This aspect of using observations in a mixed-methods study therefore enriches the data to be collected since the flexibility of this tool allows for continuous refining of the data collected from the field.

The use of observation helped the researcher to establish curriculum implementation in terms of content, methods and materials used in teaching and learning process. After observation of the lesson, the researcher held discussions with each observed teacher to learn how and what content, methods, strategies are adapted to meet the needs of the learners with disabilities in their classroom.

The researcher however faced minor challenges in the use of observation method. Out of the 12 intended observations, 7 were observed in teaching while 5 were not. The substitute for the few failed observations was discussions with the teachers on how they teach the LSENs in their classes. The following were the reasons for the failure to observe some of the lessons:

- Not all teachers were willing to be observed. However, some offered to be interviewed and shared their experiences in the classroom.
- Lesson observations and post-lesson discussion with teachers with visual and hearing impairments took longer thereby affecting other intended observations.
- Schools had just opened and some teachers had not yet settled down for the term and felt unprepared to be observed.
- In the last school, one of the teachers targeted for observation said she was not teaching that day but asked learners to copy notes. However, the teacher agreed to share her experiences of teaching the VI learners.

In qualitative research, flexibility in methodology is crucial if the desired information is to be collected. One of the considerations that impact the extent of an inquiry is the external conditions that are not within the control of the researcher. Ravid (2012:59) acknowledges this factor saying the external factors include, “the school calendar, the length of the curriculum unit or program that you want to investigate, standardised dates, or the due date of an assignment you are completing for a course”. Thus, strict adherence to the original plan would have had an influence on the quality of data collection. It is unlikely that a researcher

would find all his intended respondents ready for him as planned. Qualitative research therefore provides the researcher with flexibility to slightly change his or her strategies for data collection; otherwise, such a process would be very long-winded. The researcher used the same questions and ideas on the observation instrument to discuss with teachers who could not be observed but opted to share their experiences with the researcher outside the classroom.

However, the observation method served as a very strong tool to learn from teachers themselves how they experienced the curriculum and their emotional disposition towards the process. The transcripts of the post lesson discussions were as rich as interviews and added rigour to this study.

4.7 RATIONALE FOR THE CHOICE OF INSTRUMENTS

This section explains the rationale for the choice of the instruments used in the collection of data for this study. Basically, the choice of the instruments is based on the theory of triangulation and the mixed method design. In line with the theory of curriculum deliberation, dependency on one method would not have helped much to yield the desired results and especially fulfilling the adopted theory, which proposes interaction among stakeholders to achieve a common goal.

Triangulation is as old as the 1970s when Denzin developed a systematic approach of triangulation for social research (Flick 2014). The use of multiple methods in the collection of data for the same purpose is called methodological triangulation. According to Flick (2014:183), “Triangulation refers to the combination of different methods, study groups, local and temporal settings, and different theoretical perspectives in dealing with a phenomenon”, with implications which include the formalising of the relation between qualitative and quantitative research, the strengthening of the quality of qualitative research and designing and conducting qualitative research in an appropriate way.

Lodico et al. (2006:285) explain that the use of more than one method for the same purpose is called:

a triangulation design because the data from the quantitative and qualitative methods are compared (or triangulated) to see if they produce similar findings. Thus, the design provides both a more complete picture of the topic studied and enhanced credibility because of the use of multiple methods.

Keeves (1997) defined triangulation as “the application and combination of several research methodologies in the study of the same phenomenon”.

According to Tavakoli (2012: 364), deciding on how to mix methods, “depends on the purpose of the study, its design, and the strategies used for data collection and analysis”. Several scholars accept and explain the use of more than one method (triangulation) in one study (Denzin & Lincoln 2008; Keeves 1997; Johnson & Christensen 2012; Lodico, et al. 2006). Denzin (2012: 3) says “the use of multiple methods or triangulation reflects an attempt to secure an in-depth understanding of the phenomenon in question.” Denzin (2012:3) citing Flick (2002) further explains that “the combination of multiple methodological practices, empirical materials, perspectives, and observers in a single study is best understood, then, as a strategy that adds rigour, breadth, complexity, richness, and depth to any inquiry”. As explained by different researchers, triangulation is a very important tool in research. It adds depth and breadth of data to be collected and the practice was adopted in this study.

This study collected data using questionnaires, interviews and teacher observations. This was out of an understanding that no single method can collect all the data required in a study and the use of triangulation overcomes this lapse. Keeves (1997) is of the opinion that the use of multiple methods or measures is so as to overcome the weaknesses or biases in a single method. Johnson and Christensen (2012:269) say the objective in triangulation is to intermix or combine different methods that have non-overlapping weaknesses or strengths. Tavakoli (2012:364) highlights two of the very important arguments for mixing methods as “increasing the strengths while eliminating the weaknesses and the advantage of multi-level analysis of complex issues”. The main attraction of mixed methods research is that both qualitative and quantitative approaches bring out the best of both paradigms (Tavakoli 2012). This is further augmented by the potential that the strengths of one method can be utilised to overcome the weaknesses of another method used in the study. Further, Tavakoli (2012:364) argues that “the use mixed-methods approach helps researchers to gain understanding of a complex phenomenon by converging numeric trends from quantitative data and specific details from qualitative data. Words can be used to add meaning to numbers and numbers can be used to add precision to words”. This elaboration is in line with the paradigms selected for this study. The use of mixed methods is in agreement with the paradigms that argue that truth cannot be understood from one perspective. For instance, as Tavakoli has observed, percentages and numbers in themselves do not give enough insight into the results of a study. However, when the percentages and numbers are reinforced with verbatim records, a feature this study

embraced, a study portrays a real-life situation in the community. A combined set of perspectives as this study has adopted (mixed methods) helps to cover the weaknesses one method may have over the other and strengthen the validity and reliability of the study results. Triangulation in this study worked very effectively in that data from questionnaires was reinforced with data from interviews and observations. Gaps in data collected through instrument were covered by another instrument. This enhanced the validity and reliability of data.

Literature shows a number of triangulation techniques namely time triangulation, space triangulation, combined levels triangulation, theoretical triangulation, investigator and methodological triangulation (Cohen et al 2005). Time triangulation is applicable in cross sectional studies to see the effect of social change on studied problem. For example, in studies to do with child development, the change in behaviour caused by the effects of social change can be well understood by use of time triangulation. For example, the change in child thinking can be ascertained when time triangulation is employed. When space triangulation is employed, the researcher is attempting to overcome controversy or limitations usually that emanates from cultural studies or as (Cohen et al 2005) studies conducted within one culture or subculture. To Cohen et al (2005: 113), “cross cultural studies may involve testing of theories among different people....” This study was not meant to compare people’s cultures or beliefs. The other type of triangulation involves different investigators or observers investigating the same problem but using different techniques.

This study adopted the methodological triangulation in which survey questionnaires, interviews and observations were used to collect data. Denzin (2012:3) says “the use of multiple methods, or triangulation, reflects an attempt to secure an in-depth understanding of the phenomenon in question. Objective reality can never be captured. We only know a thing through its representations.” Data for this study was collected concurrently with the different methods hence concurrent triangulation was used. This is in line with adopted concurrent convergent mixed methods design adopted for the study. According to Ary et al (2010: 563) “concurrent triangulation occurs when quantitative and qualitative data are collected and analyzed separately but at the same time, with the findings converging in the conclusions in order to answer an overarching research question.” The choice of triangulating methods rather than time, space, or investigator lied in the researcher’s belief that triangulating methods provides higher confidence in the results. Cohen (2005) attests to this belief that “the more the methods contrast with each other, the greater the researcher’s confidence.”

Fraenkel and Wallen (2003:463) and Fraenkel, Wallen & Hyun, (2012), when advising researchers on the procedures for checking or enhancing validity and reliability says, “when a conclusion is supported by data from a number of different instruments, its validity is thereby enhanced”. Researchers need to do that which provides confidence and conclusions in the results. If the aim of research is to solve a problem, stakeholders should be able to trust the results and direct their energy solving the problem instead of creating controversy that brings further studies. In other words, research must be pragmatic in a sense. In this study the use of questionnaires, interviews and observation checklists provided similar results. Results cannot occur by chance when different instruments are used. If quantitative data gives a picture that qualitative data is speaking to, there should be a higher degree to believe the results of such a study. When different methods produce contrasting results, there is all reason to question the reliability of the instruments used to collect data.

According to Cohen et al (2005), out of the six categories of triangulation depicting Denzin’s 1970 typology, four are frequently used in education. These are time, space, investigator and methodological triangulations but further saying of the four types, methodological triangulation is the most frequently used. Jupp (2006:306) noted four types of triangulations namely data, investigator, theory and methodological triangulation but said “most often triangulation is seen as methodological triangulation either within method or between methods”. The choice of methodological triangulation in this study is however not influenced by the populist perspective. From the general level, methodological triangulation provides depth. The research design adopted for this study finds methodological triangulation more suitable. The convergent mixed methods design ensures that data is collected by different methods and results contrasted and compared to determine the differences and similarities that help with conclusions. The nature of the problem under study did not require to be studied at different times (i.e. time triangulation for instance) because the problems of curriculum implementation is an urgent matter that requires attention so that one group of learners do not remain disadvantaged. Further, the nature of the problem under study is not a cultural issue, it’s an academic and policy issue that cuts across personal belief systems. To adopt space triangulation would be adopting a reductionist approach of de-rationalising curriculum issues. The demand that this study was a PhD study leading to a qualification could perhaps be the main reason for not adopting the investigator triangulation. However, the practicality of adopting this kind of triangulation is usually questioned because researchers may have different areas of research interests and constraints.

4.8 PILOTING OF INSTRUMENTS

A pilot study tests an instrument intended to collect certain information before actual administration of that instrument. Piloting is a very important undertaking before research tools are administered as it helps to ascertain the validity of the instruments. It helps to give prior knowledge of whether the instruments designed would collect the intended data for the study. Piloting also helps to check the reliability of the instruments once administered on the actual sample. If the piloted instruments fall short of validity and reliability, they need to be revised. Thus as Pole and Lampard (2002: 111), explain it, "... two of the objectives of a pilot study are the development of some questions and the exclusion of others which prove ineffective". A pilot can therefore help the researcher improve the intended data-collection instruments. The researcher would easily evaluate whether the questions asked in a questionnaire or in an interview are clear or ambiguous to respondents and participants. Pilots also provide a picture of the nature of information the researcher wishes to collect from the intended study. Pole and Lampard (2002) say that a pilot study can be viewed as a piece of research in its own right. The researcher can gauge whether the study being undertaken would yield the desired results or not.

4.8.1 Piloting of the Questionnaire

According to Kombo and Tromp (2012), the third step in the formulation of a questionnaire after reflection on and formulation of questions is the pilot. The questionnaire was one of the instruments used in this study. The questionnaire, designed in November and December 2015 was piloted on the UNZA SE in-service teachers who were upgrading their qualifications. The pilot was conducted with respondents who had the same characteristics as the participants in the actual study. When piloting, a small sample of respondents with same characteristics as those the researcher wishes to use in the final study should be selected to answer the questions in the instrument. According to Tarling (2006:121), "all research instruments should be tested (in social research parlance – piloted) prior to use but also again after they have been implemented to gauge whether they are still working effectively or that changes made after piloting are acceptable". In this study, two pilots were done: on the questionnaire and the interview guide. The pre-test was done in January 2016 with 11 teachers who were purposefully selected by virtue of their teaching in special and inclusive schools. The respondents were from different provinces and districts with different teaching

experiences ranging from 1 – 15 years. Preliminary findings of the pilot questionnaire showed validity and reliability that was collected because of the varied responses from the different respondents. A few questions were not answered by most respondents. These were:

- i. Qualifications obtained
- ii. Explain what your role was at each of the stages
 - a. Planning
 - b. Creation
 - c. Implementation
 - d. Reflection
- iii. List very good learning aspects the revised curriculum has brought up for LSEs.

The failure to answer these questions prompted the researcher to revise the questions. Validity of data may be affected once certain key questions are left out. Reduction of the number of questions, compressing some questions into tables, formatting and rewording of some questions was also done (Appendix A). In a nutshell, the pilot was a necessity for this study as it helped check the practicality of the instruments that were used in the field. Most questions answered during the pilot showed the direction of the study and motivated the researcher to go ahead with the study.

4.8.2 Piloting the Interview

The interview was piloted with two participants. One was a former SESO who had joined the university. The other one was an ESO who was doing a master's programme at the UNZA. The responses they provided demonstrated that the data the researcher was going to collect would be valid and reliable. For instance, they were able to provide their personal perspectives on the curriculum review, indicating that they were not invited to attend the foundational preparations for revised curriculum and did not even know whether there was a needs assessment prior to coming up with the revised curriculum. Thus, such a response gave an indication to the researcher of lack of involvement of ESOs in the field. The problem of lack of materials was expected and it equally came out from the pilot interview. The first set of interview questions had thirteen (13) questions which were trimmed to nine (9) after the pilot. Based on the pilot interview conducted with the ESOs, minor revisions were also done

to the interview questions for CS where the initial 10 questions were trimmed to 6. Basically, the questions for both ESOs and CSs were the same but differed slightly in terms of the roles they performed in curriculum development and monitoring of implementation. The researcher also gained confidence in the nature of information that was provided.

4.9 DATA ANALYSIS

After data is collected, the researcher has a responsibility to make sense of the collected data. According to Mertens, Pugliese and Recker (2017:1) “data analysis is an iterative process of manipulating and interpreting numbers to extract meaning from them answer research questions, test hypotheses, or explore meanings that can be derived inductively from the data”. However, this definition by Mertens et al. (2017) seems to be biased toward quantitative data analysis as emphasis is on numbers being manipulated. In a mixed-methods study, the researcher has the option to choose the type of analysis to use. The analysis is dependent on the design used in the study. According to Osborne (2008:131), “Mixed methods data analysis includes parallel mixed analysis, concurrent mixed analysis, and sequential mixed analysis”. Creswell (2014a) says the type of mixed design chosen determines the type of analysis used. He names the types of designs used in mixed methods studies as convergent parallel mixed methods; explanatory sequential mixed methods; exploratory sequential mixed methods; embedded mixed methods; transformative mixed methods; and multiphase mixed methods. Data analysis follows the design chosen. This study adopted the convergent mixed methods design. The convergent parallel design of mixed methods approach meant that both qualitative and quantitative data was collected side by side, thus while questionnaires were being completed by some teachers, teacher observations were conducted with others at the same school. Interviews were also conducted during the same period. According to Creswell (2014: n.p.), the researcher using convergent parallel design “collects both quantitative and qualitative data, analyses them separately, and then compares the results to see if the findings confirm or disconfirm each other”.

4.9.1 Quantitative Data Analysis

Quantitative data was analysed separately using the SPSS. The last set of data collected was the questionnaires. This is because they formed the largest sample and covered a larger geographical area of three provinces. According to Hendricks (2011), data analysis begins with the recognition of variables. In a general sense, the term variable describes anything that changes. However, Mertens et al. (2017:1) state that:

exploration is the first step of any data analysis: we run a few basic manipulations and tests to summarise the data in meaningful statistics, such as means and standard deviations; we visualize the data; we try to improve our understanding of the information in the data

However, Gosh (2015: 261) says “the first step in the analysis of data is a critical examination of the assembled data”. The variations in steps the scholars suggest seem to emanate from the different understanding of what analysis is, when it begins and when it ends. Some scholars actually contend that analysis starts as soon as data collection begins and goes on until overall sense of the data made at completion of analysis. Ghosh (2015) describes the order in the analysis of results as categorisation, coding, tabulation and statistical analysis and inference. As was observed in the versions of steps in a qualitative study, so is the situation in a quantitative study. Analysis in this study started with the identification of variables for entry into SPSS. This study dealt with nominal and ordinal data, which are nonmetric measurements (Jupp 2006). According to Murphy, Myers and Wolach (2014:43), “nonparametric test statistics do not require a priori assumptions about distributional forms, and tend to use little information about the observed distribution of data in constructing statistical tests”.

After collecting all the questionnaires, the researcher went through each questionnaire and checked the completion rates by respondents and ascertained that most questions were fully answered. The researcher then organised the questionnaires according to provinces and numbered them serially in readiness for entry into SPSS. The researcher decided to enter the questionnaires province by province for easy checking and possible corrections. Those whose variables were entered were labelled ‘entered’ and signed to avoid re-entry. Not all questions in the questionnaires were coded in SPSS because some of the questions were open-ended, used to validate the ‘yes’ and ‘no’ questions. For instance, there were questions that asked, “if your answer to the previous question is ‘Yes’, explain ways in which you were trained”. Some of such questions were transformed into quantitative codes and analysed quantitatively while others were analysed qualitatively by use of NVIVO software.

After coding the quantitative data, the researcher ran case summary reports to verify the total entries and see the excluded cases so as to determine their impact on overall analysis. Running summary reports in SPSS also helped the researcher to review the questionnaires and verify wrong entries and unassigned entries. Quantitative data was subjected to the SPSS in order to derive meaningful descriptive representations in terms of tables, percentages,

means, standard deviations, graphs, significant differences, and correlations among data. Sidhu (2014), Kombo and Tromp (2013) and Mukherji and Albon (2015) acknowledge the use of SPSS as a quantitative data analysis tool. The researcher used non-parametric tests in SPSS to try and obtain the meaning of the data from different angles in order to get the consistence of data. The Chi-square test of goodness of fit and bivariate correlations was run to establish significant differences and correlations among data. There was an advantage in using non-parametric tests for this study. Murphy et al. (2014:43), believe that “nonparametric tests can have more power than their parametric equivalents under a variety of circumstances especially when conducting tests using distributions with heavy tails (i.e. more extreme scores than would be expected in a normal distribution)”. It is because of such presumed power that this study used nonparametric tests to help easily generalise data from 120 respondents, thereby reducing high error occurrences during analysis. In analysing the data, cross tabulations helped to cross-check data relationships with their sources. Further, Pearson’s correlation coefficient and bivariate relationships were run to obtain differences and relations between the variables.

4.9.2 Qualitative Data Analysis

The data collected in this study was subjected to rigorous analysis in order to obtain the desired meaning from which conclusions were drawn. Flick (2013: 5) defines qualitative data analysis as “the classification and interpretation of linguistic (or visual) material to make statements about implicit and explicit dimensions and structures of meaning-making in the material and what is represented in it.” The researcher considered the design adopted to guide this study. In this study, the researcher analysed part of the qualitative data first because most of this data was ready before the quantitative data. Several scholars propose stages of data analysis with slight differences in the order. For instance, Table 4.3 below provides an illustration of three approaches to qualitative data analysis.

Table 4.3

Stages in qualitative data analysis

Step	Murkheji (2015)	Lodico, et al. (2006)	Creswell (2014a)
1	Becoming familiar with data	Preparation and organising of data	Organising and preparing for data analysis (transcribing, typing field notes, cataloguing, sorting arranging data into different types)
2	Coding the data	Reviewing and exploring the data	Read and look at all the data (getting general ideas)
3	Categorising the codes	Coding data into categories	Start coding of the data
4	Identifying themes and relationships among the codes	Constructing descriptions of people, places and activities	Use the coding process to generate a description of the setting or people as well as categories or themes for analysis
5	Developing concepts and arriving at generalised statements	Building themes and testing hypotheses	Advance how the description and themes will be represented in the qualitative narrative
6		Reporting and interpreting data	Making an interpretation in qualitative research of the findings or results

One advantage of qualitative data is that the researcher starts analysis right at the point when data is being collected, at the time of the interviews or discussions with the respondents. The researcher in this study started familiarising himself with the data from the point of collection. All interview data and post lesson discussions with teachers were recorded on an MP3 audio device. After every interview and post lesson discussion, the researcher listened to the audio recordings and made brief notes in his note book. The brief notes highlighted general ideas that came from respondents. The researcher also transcribed the audio recordings, thus becoming even more familiar with the data collected and helping to reflect on the interviews and post lesson discussions had revealed. This practice is recognised as applicable by Creswell (2014:n. p.) saying:

data analysis in qualitative research will proceed hand-in-hand with other parts of developing a study namely, the data collection and write-up of findings. While interviews are going on, for example, researchers may be analysing an interview collected earlier, writing memos that may ultimately be included as a narrative in the final report and organising the structure of the final report.

This enabled the researcher, especially that he used unstructured interviews to be able to improve his interviewing techniques and collect even richer data in subsequent interviews and post lesson discussion. At the completion of transcription, the researcher made a print-out

of 243 pages of transcribed interviews and post-lesson discussions. The data was subjected to rigorous reading and re-reading to ensure little or nothing relevant was missed out during analysis. Lodico et al. (2006:305) observe that “qualitative researchers should continually read, reread, and reexamine all of their data to make sure that they have not missed something or coded them in a way that is inappropriate to the experiences of the participants”. The researcher went through each script to edit spellings, removing names of respondents and places for ethical reasons and highlighting key concepts that emerged from the interviews. (The verbatim records needed to remain without alteration). This was to prepare the data for coding.

After making corrections on the printed transcripts, the researcher made corrections on soft copies, named and ordered the transcripts. The transcripts were then separated according to their categories: interviews for ESOs (N = 12); interviews for CS (N = 2); and post-lesson discussions (N = 12). Codes were allocated to the interviewees as follows: ESO1 – ESO12; CS1, CS2; and TR1 – TR12 for post-lesson discussions conducted after observation. Codes for qualitative data collected through questionnaires were SET 1 – SET 120. The folders with each type of data were then uploaded into NVIVO software for further organisation and systematic sorting, coding, categorisation and analysis. NVIVO is a computer software package that helps to analyse qualitative data (Mukherji & Albon 2015). In NVIVO, each interview was coded and memos created to help remind the researcher of very important points. While coding was being done, NVIVO also provided a platform to edit the transcripts and further provided the researcher with an opportunity to interact with the data. Memos created were able to help the researcher identify similarities and differences from coded data even before actual analysis itself. Annotations were used to make comments on key points that were observed during coding. After data coding was done, a check through the codes was done and certain points that were wrongly coded were un-coded and recoded appropriately. Case codes were also created to easily provide a platform for comparison with data coded as internal codes. After all necessary coding was done, the researcher made sense of the coded data by running word frequency charts from the biographic respondent data, cluster analysis and comparison diagrams. These provided the basis for qualitative data analysis in this study. Thus, by use of cluster analysis, the researcher was able to identify coded themes and export the data under each theme to the main document. The comparison diagram helped the researcher to identify similar and different ideas between codes. Thus, similar concepts were grouped at the centre while differences were set on each side.

While the researcher ran the actual analysis tools in NVIVO, analysis continued from one stage to another. This is perhaps the reason some scholars contend that analysis is actually an on-going process because the researcher interacts and starts making sense of the data right from the time data starts being collected. Creswell (2014a) acknowledges that data collection and data analysis must be a simultaneous process for qualitative research.

4.10 VALIDITY AND RELIABILITY OF RESULTS

Validity and reliability are measures that help researchers to determine whether their studies are worthy and should be believed and used to solve an identified problem. The ultimate aim of research is to provide solutions to a problem. Validity is a measure of the extent to which the research instruments have helped the researcher to collect the intended information for a study. Reliability is a measure of confidence in the study, determining whether the results can be relied on to solve an identified problem or not. In reliable studies, results are replicable or transferable. The following section explains the concepts of validity and reliability and how they were taken care of in this study.

4.10.1 Validity

According to Vanderstoep and Johnson (2008), Lodico et al. (2006) and Mukherji and Albon (2015), validity is a measure of the trustworthiness of a study. A study whose tools measure what it is intended to measure is valid. Though this study was not entirely quantitative, truthfulness of the measure (internal validity) was ascertained through the nature of responses from different respondents. Vanderstoep and Johnson (2008) explain that findings can meet external validity when the findings from an investigation can be generalised to other samples, populations or settings. The same results may still be found if the study were conducted in other parts of the country. The nature of similarity in responses collected from the different places provided an indication that the questions were clear. There was adequate representation of responses from all provinces. This was achieved through cross tabulations, and correlations that were run to confirm the trends of responses in different provinces against the understanding of certain concepts such as curriculum adaptation. Thus, construct validity was achieved. This is in line with Creswell (2014a: n.p.) who said; “validity using the convergent approach should be based on establishing both quantitative validity (e.g. construct) and qualitative validity (e.g. triangulation) for each data base”. The sample sizes in

quantitative data were equal across the sampled sites, i.e. 40 respondents per province. The use of various methods equally ensured the validity of the qualitative component of this study. The responses that were provided met answered the research questions which focused on curriculum development.

4.10.2 Reliability

Reliability is an attribute of research which measures the consistency of data or research findings. This means such findings would be the same had the study been conducted somewhere else where there are similar respondent characteristics. Vanderstoep and Johnson (2008) define reliability as the extent to which a measure yields the same scores across different times, groups of people, or versions of the instrument. Ary, Jacobs, Sorensen & Razavieh (2010:236) “the reliability of a measuring instrument is the degree of consistency with which it measures whatever it is measuring. This quality is essential in any kind of measurement.” Instruments are tested for internal reliability in order to eliminate sources of error and ensure confidence in results. Since this study employed a mixed-methods design, both measures to test for reliability were considered. This study attained reliability through various tests.

- The pilot test of the instruments provided a litmus test of the nature of responses the study was going to bring forth. It was observed through the administered questionnaire that this study is reliable because it produced same responses as was seen in the pilot.
- The use of different instruments to collect data yielded same results. Questionnaires, interviews and teacher observations yielded consistent results. For instance, the challenges faced in the implementation of the curriculum, the understanding of curriculum adaptation and the status of teacher skills in teaching LSENs were established through all the three instruments.
- Even within each instrument, responses from different respondents in different places were similar. Ghosh (2015:244), says in a test for reliability, if “the same questionnaire can be tried on two similar samples and if the percentage of response are similar, the samples are to be regarded as reliable”.
- The data was collected at different times (time reliability) and in different places (geographical) but the results were consistent regardless of when and where the respondents were located.

- Cross tabulations in SPSS helped to cross-check certain variable relationships which were established by comparing provinces.

The questionnaires were tested for internal reliability using Cronbach's alpha measurement. Johnson and Christensen (2012:142) explain the Cronbach alpha as a coefficient alpha providing, "a reliability estimate that can be thought of as the average of all possible split half correlations, corrected by the Spearman-Brown formula." Since this study adopted a mixed methods design, the questionnaire had mixed questions. Only quantitative data scored on SPSS was subjected to the reliability test. Out of the 39 selected items tested, the stress inventory was (39 items; $\alpha = .773$) which is higher than the accepted (0.7). This tells us that the instrument was reliable. "A value of Cronbach alpha size above 0.70 can be used as a reasonable test of scale reliability." (Gaur & Gaur (2009: 134). The questionnaire was divided into four major categories. The table 4.4 shows the distribution of Cronbach internal consistence scores.

Table 4.4

Reliability scores of questionnaires

Category	items #	Cronbach alpha
Knowledge and involvement in CDP	8	0.585
Curriculum adaptation	5	0.590
Materials and strategies	13	0.798
Curriculum adaptation strategies	13	0.790
Inventory stress value	39	0.773

As can be observe in table 4.4, the inventory stress value gives the confidence of reliability in the research instruments used.

Basically, when mixed methods are used, validity is ascertained through triangulation or the use of multiple methods (David & Saeipoor 2016). As earlier alluded to, this study used methodological triangulation using the principles of complementarity, completeness, expansion, corroboration, compensation and diversity. These principles, each in its own way helped to ascertain the validity of data.

4.11. CREDIBILITY AND TRUSTWORTHINESS OF THE FINDINGS

The use of mixed methods gives the confidence to believe the results and findings. Keeves (1997) and Denzin & Lincoln (2008) note that methodological triangulation especially when used in mixed methods approach has proven to be a very effective strategy that improves research credibility and trustworthiness by overcoming researcher biasness, and providing rigour, breadth, complexity, richness and depth. In qualitative research, issues of credibility, dependability and conformability help to determine trustworthiness of research findings. This study attained credibility and trustworthiness in the many ways.

4.11.1. Credibility

Chilisa & Preece (2005), Korstjen & Moser (2018), equate credibility to internal validity in quantitative research saying research evidence is therefore credible if it represents as adequately as possible the multiple realities revealed by the participants. Chilisa & Preece (2005), Anney (2014) contend that credibility of research findings can be ascertained by how long the researcher takes in the field. Thus, prolonged stay and engagement with participants in the field enhances the credibility of a study. Anney (2014: 276) says, “.....prolonged engagement in the fieldwork helps the researcher to understand the core issues that might affect the quality of the data because it helps to develop trust with study participants.” Pitney, & Parker (2009) call this participant checks. Although some researchers have proposed a period of engagement with participants in field, this depends on the design adopted for a study. Ethnographic studies for instance can take as long as 6 months or more to understand the context being studied. This study used the convergent parallel mixed methods design, which in itself houses several advantages in ascertaining the credibility of the results.

Several other steps were taken to ensure credibility in this study. First, the researcher is a professional within the field of education. Using this advantage, before collecting data, the researcher created rapport with participants to introduce himself as a member of the teaching profession and assured them on the significance of the study. This was to develop trust with participants. Further, after observation of lessons and well in data analysis, the researcher sent text messages to observed teachers requesting them to provide any other terms that were difficult to sign and any other data that they could have forgotten telling the researcher. The

researcher received additional information from some participants. On 7th July 2017, all the transcribed transcripts of the interviews were emailed to respective research participants so that they could read through and state whether some information could be removed from the interview or some information could be added. Phone calls followed up to ask the participants to work on the sent emails. Below was the email:

Dear participant,

I appreciate your wonderful contributions to the study interview that you participated in early this year in February. As per requirement we would like to ensure that you as a participant is satisfied with the information you provided on curriculum implementation for learners with special education needs

Attached is a transcribed transcript of the conversation we had. Kindly go through and make subtractions or additions. Indicate which parts you feel may not be necessary or were wrongly said and you wish to say them rightly. This will help us present a true reflection of curriculum implementation for our learners. This does not mean however that we should change the picture as it truly was initially but to simply correct or adjust the presentation of facts.

Kindly note that this conversation is still bound by ethics and so is shared between you and I as a researcher and no one else. As promised earlier during the interview, this is an academic study with respect for ethics and so will not reflect identities in the final report,

I will appreciate if you have time to go through the document and make the necessary notes! You can use track changes or comments so that I am able to see areas which need to be attended to.

One of the participants among ESOs replied to the email saying everything was okay except spellings and grammar. Phone calls were made to participants to ask them to verify some information they provided. This was part of the member check strategies that was to allow participants go through their own work and make comments on the data they provided. It was also an act of assuring them the genuiness of the study. Chilisa & Preece (2005) say member check can be formal or informal. Pitney & Parker (2009), acknowledge that participant checks can be conducted in two ways; by transcript verification to see the accuracy on their interviews or by asking the participants to verify the findings i.e. (debriefing).

As part of peer debriefing, the preliminary study findings were presented on 7th July 2017 at the Masters and Doctorates seminar week at UNISA and the researcher benefited from the comments that were given as part of debriefing. Further, as part of debriefing process, a paper titled “Special Education teachers involvement in curriculum development in Zambia”, an extract from the results of this thesis was presented at Southern African Society for Education (SASE) conference on 4th October 2017 in Botswana. Feedback and comments were given to the researcher. For instance, one comment that the researcher benefited from peer debriefing was;

“Your findings should not be negative things only, show the reader also the positives. What are the strengths and the weaknesses of the study?”

The comment made the researcher to get back to the scripts to re-analyse the data and identify the positive elements of the study, thus a positive check on researcher subjectivity. Negative case analysis is part of credibility. Verbatims with contrary views were noted and recorded in the verbatims. However, since they were fewer, they did not influence the final conclusions of the results and findings. As a researcher, it was only necessary to highlight views in a balanced manner.

The analysis of qualitative data by use NVIVO qualitative software played a significant role in ascertaining the credibility of this study (*see process in 4.9.2*). Journals were created as part of memos in NVIVO. Besides, every activity during data collection process was manually recorded in a diary on a daily basis. For instance, extra data of SETs observed, whether male or female, disabled or not were recorded in a diary. In NVIVO, reminders on key points related to data collected each day were noted down as key issues for analysis and reflection.

Further analysis by use of NVIVO qualitative analysis software enhanced the credibility of the findings for this study. For instance, a Pearson correlation coefficient of qualitative responses in the three provinces showed no differences among the provinces (*see table 5.15*). Coding density of inappropriate and unclear responses was run in NVIVO and compared between provinces (*see figure 5.3*). When the qualitative analysed data was compared with the quantitative data, similarities were observed. These processes helped the researcher to be focused and ensured that the data collected was credible enough.

4.11.2. Dependability

Dependability (trustworthiness) Ary et al (2010), is equal to reliability in quantitative research refers to the consistency and replicability of findings of similar findings. According to Williamson, Radford & Bennetts (2003: 131), dependability requires that the argument is complete, allowing the reader (or reflective designer) to follow and understand it without unexplained leaps from argument to conclusion.” In this study, the interviews and observations were conducted in different provinces. The questionnaires had both qualitative

and quantitative questions which collected responses from different schools, districts and provinces. Triangulation was the strength that determined the dependability of qualitative data in this study. The different instruments used to collect data complemented each other. The responses collected provided a similar picture about curriculum implementation and its challenges. Ary et al (2010: 503) explain the replication logic in determining the dependability measure in qualitative research saying “.....the more times a finding is found true with different sets of people or in different settings and time periods, the more confident the researcher can be in the conclusions.” SETs, ESOs and CSs from different settings and involved at different times but giving similar findings as demonstrated in chapter 5 shows how such findings are dependable.

One other strategy used in qualitative research to ensure dependability is documentation, Ary et al (2010) call it audit trail. In this study, data documentation was critical from the onset of data collection through analysis to reporting. Data was collected and stored according to the type collected. Quantitative data was on questionnaires and entered in SPSS. Qualitative data was coded in NVIVO in which memos or diaries were created for reference from time to time during analysis. The study collected detailed interview data which was transcribed into more than 243 pages. These were coded in NVIVO qualitative software providing a high coding density on certain themes that came out (*see appendix 'E'*). This further satisfies the qualitative measure of dependability.

4.11.3. Confirmability

Confirmability is another measure for trustworthiness in qualitative research. It is a measure of biasness on the researcher. With this in mind, the researcher should be able to present findings that are not skewed to his or her interests. Ary et al (2010) equate confirmability to objectivity in quantitative research. Ary et al (2010: 504) say confirmability and objectivity “both deal with the idea of neutrality or the extent to which the research is free of bias in the procedures and the interpretation of results” Confirmability concerns the aspect of neutrality (Korstjen & Moser 2018). “You need to secure the inter-subjectivity of the data. The interpretation should not be based on your own particular preferences and viewpoints but needs to be grounded in the data” (Korstjen & Moser 2018: 122). Audit trail like in dependability is used as a strategy to ensure confirmability. Data analysis followed steps as

described in 4.9.1 and 4.9.2. Bias in mixed methods is overcome by triangulation. In this study, the qualitative findings from questionnaires confirm the results from interviews and observation and vice versa. Further, coding density in NVIVO qualitative analysis for instance cannot allow a researcher to skew the findings. Responses demonstrating understanding of the concept of curriculum adaptation were written by respondents through the open and close ended questionnaire. These were picked as they were and used as examples. These strategies ensured that the results of this study can be confirmed by other researchers.

4.12. HOW THE USE OF MIXED METHODS ENRICHED THIS STUDY

The adoption of both quantitative and qualitative approaches benefitted this study in many ways. Table 4.5 illustrates how quantitative and qualitative approaches collected data and supported each other to enrich the study.

Table 4.5

How mixed methods helped this study

QUANTITATIVE DATA	QUALITATIVE DATA
Gave figures representing the magnitude of lack of involvement	Gave full descriptions of the lack of involvement
Captured opinions of SETs and teachers teaching LSENs in general	Provided extra information that there were teachers with disabilities also that needed help to implement the curriculum
Provided a general picture of the status of materials for implementation of the curriculum	Provided a detailed description of how the scarcity of materials was affecting the implementation process
Demonstrated that teachers did not have a better understanding of the benefits of the revised curriculum	Demonstrated that Ministry officials such as ESOs and CSs had a better understanding of curriculum benefits to SEN than the teachers.
Provided a list of strategies SETS preferred to use	Provided extra strategies teachers were using to implement the revised curriculum
Provided the numbers of those disappointed with the level of involvement	Provided the wishes and disappointments in word descriptions

4.13 ETHICAL CONSIDERATIONS

The concept of ethics in education research is increasingly becoming a very important undertaking just as it is in the medical and other sensitive fields that require that individual's privacy and rights to participate in studies are protected. Ethics, according to Johnson and Christensen (2012) are principles and guidelines that help uphold the things we value. Johnson and Christensen (2012) say, there are three approaches to ethics namely deontology, ethical scepticism and ethical utilitarianism. The deontological approach says ethical issues must be judged on the basis of a universal code where, for instance, it is wrong to use deception in research. Ethical scepticism argues that concrete and inviolate moral codes cannot be formulated because ethical rules are relative depending on one's culture and time hence the need for researchers to do what is right when it is right and not to do what is wrong when it is wrong. Ethical utilitarianism argues that ethics depend on the consequences of a particular study for the participant and the benefits that may arise from the results of the study. If the benefits outweigh the costs, especially in cases where research results help humanity, such a study is ethically acceptable even if it breaks the ethical norms (Johnson & Christensen 2012). In utilitarianism, human consequences for happiness are calculated and the right course of action should be what satisfies largest number of people (Denzin & Lincoln 2011).

From this study's perspective, ethics is a crucial undertaking regardless of the interpretation. If anything, it is such various interpretations that should make 'us researchers' take extra care of our respondents because we do not know the repercussions of not protecting them. It is inhumane to mistreat a human being the way we wish to for the benefit of a society of which that human is a part, in the interest of research. This has far-reaching negative effects on future research studies if allowed. Who would wish to watch his or her mother publicly tortured or even privately just to obtain her reactions that are perceived to be of public benefit? If such were to be done, the victim of such planned torture should be in agreement, society equally needs to be in such agreement. According to Denzin and Lincoln (2011:65), subjects must agree voluntarily to participate; that is, without physical or psychological coercion. Regardless of the ethical approaches, participants' identities and dignity need to be protected. Once ethical issues are not considered in research, the participant is put at risk. Kvale and Brinkmann (2009:273) observe that "it may be difficult for a researcher to anticipate the potential ethical and political consequences of an interview". People fear to be misquoted. They become highly sensitive and suspicious of activities that seemingly touch on

their jobs and personal integrity. Their participation in any study needs to be assured. It is also worth considering that at no time should respondents be subjected to humiliation due to questioning they may not have anticipated. Research should not leave respondents disappointed or regretting having answered some research questions through an interview or any other instrument. For this reason, respondents need to know the purpose of the study and agree or disagree to participate. Thus, respondents need to be protected from physical, emotional and psychological harm. When ethical issues are respected, researchers are likely to collect the desired data. Lindon (2015) believes researchers in social sciences and psychology need to take ethics as a way of respecting research participants and therefore informed consent should be sought from respondents. For people to provide honest answers, their willingness to participate in a study is vital (Lindon 2015; Mukherji & Albon 2015). The need to explain the purpose of the study, procedures for data collection, right to withdraw, what respondents would be asked to do or not to do and who will have access to the data, are some of the important ethical considerations that Mukherji and Albon (2015) describe as features of informed consent. Informed consent is a critical requirement before engaging participants into a study. Ary et al (2010) explain that researchers need to consider three main types of ethical obligations namely obligation to the subjects, the profession and the legal obligation. Ary et al (2010) advise that participants have to give informed consent to participate in a study, the right to confidentiality for participating in a study needs to be assured, and avoidance of deception in the process of data collection. If respondents are not willing to participate, researchers are not expected to force or coerce them into participating as doing so may end up compromising the quality of data that would be collected.

Prior to undertaking this study several steps were taken to ensure adherence to ethical requirements. First, when designing the instruments, ethical issues were taken into consideration. Questionnaires and interview questions did not include names of respondents and participants. Further, ethical clearance was sought from and granted by the University of South Africa. A letter introducing the researcher was also collected from UNZA, the researcher's work place (*see appendix C; permissions and introductions*).

In the field, the researcher paid a courtesy call on the provincial education office (PEO) office and subsequently on the DEBs office in each district where the study was conducted to explain his presence in the district. An information sheet explaining the purpose and need of the study was distributed to DEBs office and to first participants (ESOs) (*under appendice B*). The researcher also took time to explain the study purpose and asked to visit the schools

where data collection was done. Before distributing questionnaires to schools, the researcher visited school administration offices to explain the purpose of his visit to each school. All school administrators were given the information sheet and the researcher explained the purpose of the study. With teacher respondents, the researcher explained the study purpose and its significance before explaining the need to consent and withdraw if they wished.

Further explanation assured respondents of confidentiality of their responses. They were informed that their names would not be reported in the final research report and they needed not to write their names on the questionnaire. Participants that were observed in classroom teaching, ESOs and CSs that were interviewed were asked for permission to be recorded on MP3 voice recorders for purposes of analysis. They were promised that recorded information would not be accessed by 3rd parties and would be destroyed after data analysis. After respondents agreed to participate in the study, consent forms were given for them to sign (*see appendix B (i)*).

Ethics should be adhered to through out the research process. Ethical issues are critical in especially qualitative research where research participants are usually limited and restricted to smaller numbers. They can easily be identified once researchers don't take precautions to protect their privacy. Flick (2013) observes that qualitative data analysis as well as presentation of findings has implications on the level research ethics. During data analysis, new issues emerge and if researchers do not take extra care about ethics, participants may be predisposed to unforeseen dangers about the credibility of their positions.

The new forms of data raise issues of data protection and more generally of keeping the privacy of research participants. They also raise questions of how comprehensive the knowledge about the participants and the circumstances has to be for answering the specific research question of a project. (Flick 2013: 15)

This view is shared by other scholars. Ary et al (2010: 591) contest:

“Informants and participants have a right to remain anonymous. This right should be respected when no clear understanding to the contrary has been reached. Researchers are responsible for taking appropriate precautions to protect the confidentiality of both participants and data.”

It is therefore important that researchers take note of all variables that are likely to divulge the participants' privacy during analysis and reporting of findings. To ensure this, the researcher did not divulge the names, sex, district and province of participants in qualitative verbatim

reporting. The participants could be easily singled out once such variables are reported alongside their verbatims. The participants may easily be identified and victimized or have their personal attributes questioned, aspects that may lead to loss of employment. Victimization of participants resulting from lack of researcher's upholding ethics deters participants from participating in future research. The intention of this study is to provide trustworthy empirical evidence that should be able to inform policy and better the education of the underprivileged (LSEs).

Confidentiality is a very important aspect in research ethics. Cooper (2016) advises researchers to take into consideration several steps that ensure subject's identities and the link between their identity and data to remain confidential. According to Cooper (2016) such steps should include assigning subjects identification numbers that should not be related to the data they give. Other aspects are keeping informed consent documents separate from data sheets and storing them in a secure place. He further advises removal of identifying information as soon as it is no longer needed. Internet security systems have also been advised for computer stored data. In this study, all data was handled and stored by the researcher. Coding systems for questionnaires involved numbers. Even then, the questionnaires did not have a provision for respondents to write names and the interviews did not ask for names and other detailed personal characteristics.

Finally, ethics was adhered to up to the time of reporting results. Ary et al (2010) note the importance for researchers to report findings honestly and exactly as found rather than reporting findings in a misleading manner. This is a moral obligation that illuminates the researcher's position within the profession to abuse his or her position as a researcher. The aim of research is to resolve a perceived problem. If data reports to the contrary, no manipulation of the data should be entertained. The use of more than one method helped the researcher to cover up this gap and overcome possible biases.

4.14 CHAPTER SUMMARY

In summary, this chapter discussed the methodologies used in this study. The study applied the mixed-methods convergent parallel design and employed a mixed method paradigm such as the critical theory. The chapter explained the population, sampling and its procedures, the

research tools used and how the data was collected and further explains the analysis procedures and the ethical considerations employed. Validity and reliability were discussed and it was indicated that the results could be transferable, dependable and credible. The next chapter presents, interprets and discusses the results and findings of the study.

CHAPTER 5:

PRESENTATION, INTERPRETATION AND DISCUSSION OF RESULTS AND FINDINGS

5.1 INTRODUCTION

In the previous chapter, the research design and methodology was presented. This chapter presents the results and findings, interpretation and discussion. The study entitled “Curriculum Implementation for LSENs: The Case of Selected Inclusive and Special Schools in Zambia” was guided by the following research questions:

a. Main question:

How are teachers in special and inclusive schools implementing the curriculum for LSENs?

b. Sub questions:

- To what extent were teachers for SE involved in the CDP?
- How are SETs implementing the 2013 revised curriculum to meet the learning needs for LSENs?
- What challenges are SETs facing in implementing the 2013 revised curriculum to the needs of LSENs?
- What methods and strategies SETs were being used to implement the curriculum to meet the learning needs of LSENs?

The results and findings have been presented according to the research questions in a convergent parallel format. While presenting results and findings under each research question, interpretation and discussion also followed, in some cases after both quantitative and qualitative results and findings are presented and interpreted. This manner of presentation was guided by convergent parallel mixed methods design that the study adopted. According to Creswell (2014a), a researcher who adopts the convergent mixed methods design presents the results and findings in a parallel format. Figure 5.1 is an adapted format of results and findings presentation using the convergent mixed methods design.

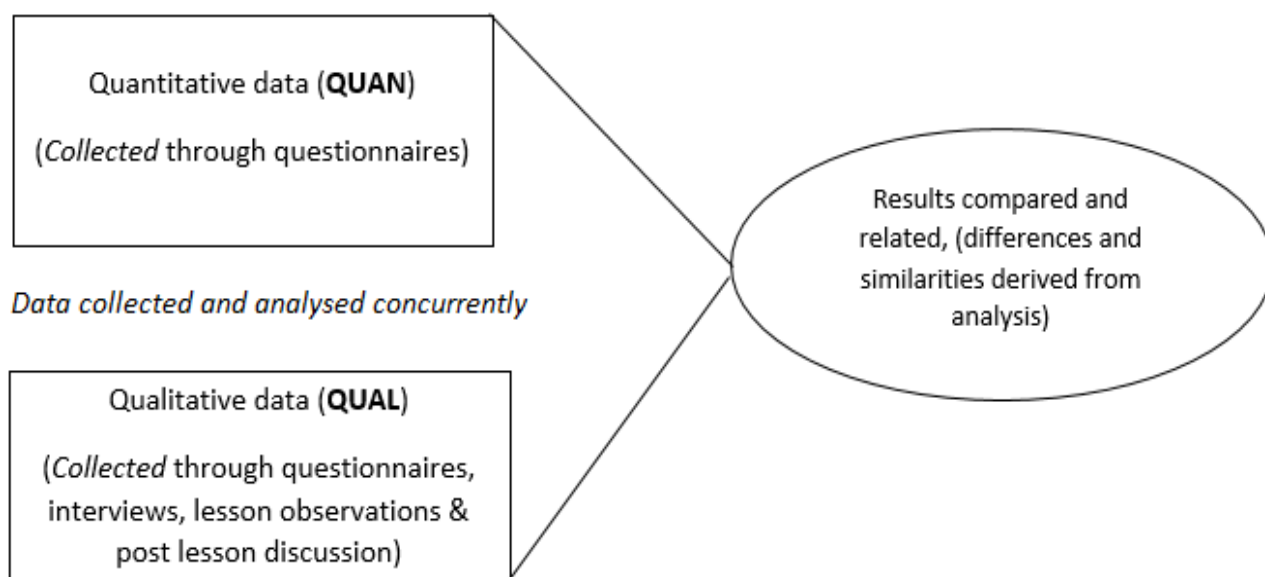


Figure 5.1: Nature of analysis adopted

From the description presented in figure 5.1, two data bases are analysed separately and then compared. Creswell (2014a), advises that there are several ways to merge the databases. One of the approaches is to use a side-by-side comparison. Comparisons can be seen in the discussion section of the mixed method study. When discussing, the researcher first reports the quantitative statistical results and then discusses the qualitative findings (e.g. themes) that either confirm or disconfirm the statistical results. Alternatively, the researcher might start with the qualitative findings and then compare them to the quantitative results. Mixed-methods writers call this a side-by-side approach because the researcher makes the comparison within a discussion, presenting first one set of findings and then the other (Creswell 2014). Flick, Scott and Metzler (2015) also explain that the choice of which data to present first depends on the overall aim of the research. They say if the overall aim is driven by the qualitative approach, then qualitative data should be given the priority for presentation and the quantitative is used to supplement but if the overall aim is quantitative, then priority should be given to it before the qualitative. They, however, note that both types of data are two complete projects which could even be published separately. In this study, both quantitative and qualitative carry the same complementary weight. Neither of the two was superior or inferior to the other. However, preference for presentation is given to quantitative first, then qualitative because most respondents for the study were captured through the questionnaire. But using Creswell's side-by-side presentation, in some cases, the data is

presented simultaneously in order to discuss the research questions logically and avoid duplication of themes.

5.2 SPECIAL EDUCATION TEACHERS' INVOLVEMENT IN CURRICULUM DEVELOPMENT PROCESS

5.2.1 Quantitative Data Presentation, Interpretation and Discussion

This section is a presentation of quantitative data. In the section, demographic data has been presented as well as figures and tables on the first theme, “involvement of SETs in CDP”. The theme has been divided into several subordinate themes for clear analysis, interpretation and discussion. Table 5.1 illustrates the collection of respondents that participated in the quantitative part of this study. The characteristics of the respondents have also been included in the table.

Table 5.1

Respondents' demographic data

Characteristic	Category	Frequency	Percentage
Provinces	Lusaka	40	33.3
	Southern	40	33.3
	North Western	40	33.3
	TOTAL	120	100
Positions	Class teacher	103	85.8
	Senior Teacher	11	9.2
	Deputy Head	2	1.7
	Head Teacher	3	2.5
	Other	1	0.8
	TOTAL	120	100
Qualifications	Certificate in SE	4	3.3
	Diploma in SE	45	37.5
	Degree in SE	25	20.8
	Masters in SE	11	9.2
	Not trained in SE	35	29.2
	TOTAL	120	100
Nature of school where teachers were teaching	Special school	62	51.7
	Inclusive school	39	32.5
	Special unit	18	15
	Hospital unit	1	0.8
	TOTAL	120	100

From the above table of demographics, the total number of teacher respondents from each province is equal i.e. ($N = 120/3 = 40$). The equal selection of respondents from the three

provinces ensured easy comparisons of data and reduced possible errors in analysis. The positions the respondents held at the time of the study helped to maintain data reliability by ensuring that the data was collected from teachers that were teaching LSENs. Thus, the majority (n = 103, 85.8%) were practicing in the classroom. The demographics further ensured that qualifications of the respondents were collected. This information helped in cross tabulations to obtain understanding of curriculum adaptation as a strategy for implementation the curriculum. Going by the MESVTEE's phasing out the certificate in primary education and upgrading to a primary teacher's diploma, the demographics show a positive trend toward the implementation of that policy among teachers for LSENs. Thus, most teachers from this point could be said to be qualified (i.e. n = 45, 37.5% had diplomas and n = 25, 20.8% had degrees in SE). What was encouraging was the fact that (n=11, 9.2%) teachers had obtained masters in SE but were still teaching in primary and secondary schools. The results are similar to Bao Duy (2016), who in a study of the effectiveness of involving teachers of English in CDP at Centre for Foreign Studies in the Mekong Delta, found that only 2% of the respondents had obtained master's degrees while the rest had bachelor's degrees (98%). The difference is that most Zambian teachers for SE had a diploma followed by those with bachelor's degrees. Though Zambia has more teachers with diplomas, the benchmark of the lowest-qualified teacher having a diploma is steadily being achieved. By Zambian standards of education currently, teachers teaching at primary school level should have the minimum of a diploma (MESVTEE, 2013c). It is well known that different countries have set minimum standards for qualifications of teachers. For instance, in Finland, the minimum qualification for any practising teacher is a master's degree in the teaching field. Qualifications indicate expertise in the field of practice. Though Zambia may not have reached this level yet, there is hope as this study reveals that there were even teachers with master's degrees (n = 11, 9.2%) teaching in some of the schools. However, this does not mean Zambia should be complacent. Teachers need competences to execute their professional duties and such competences should be symbolised by the acquisition of higher qualifications.

5.2.2 Special Education Teachers' Involvement in Curriculum Development

Table 5.2 shows results for four questions that were asked to determine the respondents' involvement in the CDP. The first three questions acted as preliminary questions and indicators of involvement in CDP. The questions sought to confirm whether SETs were aware of the 2013 curriculum change (Question 5.2.1), whether they were in possession of a

copy of the 2013 curriculum framework (Question 5.2.2) and whether they were aware that the curriculum needed to be adapted to meet the learning needs of LSENs (Question 5.2.3). In Question 5.2.4., the researcher wanted to establish whether the respondents were involved in the CDP in general.

Table 5.2

Cross tabulation of how respondents were involved at different levels of CDP

Number	Characteristic	Province	Frequency & Percentage					
			Yes	%	No	%	Total	%
5.2.1	Awareness about curriculum change <i>p-value</i> = .434	Lusaka	39	97.5	1	2.5	40	100
		Southern	37	92.5	3	7.5	40	100
		North Western	39	97.5	1	2.5	40	100
		Total	115	95.8	5	4.2	120	100
5.2.2	Having a copy of the curriculum framework (Missing value = 1) <i>p-value</i> = .395	Lusaka	20	50	20	50	40	100
		Southern	25	62.5	15	37.5	40	100
		North Western	19	48.7	20	51.3	39	100
		Total	64	54	55	46	119	100
5.2.3	Being aware that the curriculum needs to be adapted <i>p-value</i> = .646	Lusaka	34	85	6	15	40	100
		Southern	35	87.5	5	12.5	40	100
		North Western	32	80	8	20	40	100
		Total	101	84	19	16	120	100
5.2.4	Involvement in CDP <i>p-value</i> = .875	Lusaka	3	7.5	37	92.5	40	100
		Southern	3	7.5	37	92.5	40	100
		North Western	2	5	38	95	40	100
		Total	8	6.7	112	93.3	120	100

Source: survey data

* significant at 0.05 level

When SETs were asked about their awareness of the curriculum change that took place, the responses demonstrate affirmative teacher awareness of the change of the curriculum, an initial positive indicator that perhaps they were involved in the CDP. The Chi square test results (χ^2 (2, n = 120) = 1.67, p > .05), indicated that there were no significant differences in terms of awareness between provinces where respondents were drawn for the study. Respondents were definitely aware that the curriculum had changed. Thus (n = 115, representing 95.8%) agreed while (n = 5 representing 4.2% said they were not aware). While the percentages tell us that most respondents were aware, all provinces provided similar responses without significant differences.

On Question 5.2.2., whether SETs had a copy of the curriculum framework or not, results showed there were no significant differences between provinces at ($\chi^2 (2, n = 119) = 1.86, p >.05$). Possession of a copy is the first evidence of awareness and knowledge of the contents of the curriculum. The curriculum framework copy is a reference resource that all teachers are supposed to have in order to read and understand the curriculum content. It is a key resource a teacher needs for planning. However, the results show that ($n = 64, 53.3\%$) had the copy while a substantial number of teachers also did not have ($n = 55; 45.8\%$). Data collection for this study took place from end of 2016 to July-2017, three years after the curriculum framework was printed out. The expectation was that all teachers should have had this very important copy. Such results echo what Bantwini and Diko (2011) established in South Africa that teachers did not have the policy documents even six years after the launch of the RNCS. Further, in an evaluative study of CDP in Punjab and Islamabad, Hussain, Azeem and Shakor, (2011:267) found that even though there were a number of positives in the CDP, teachers' guides were not available for guiding teachers and special teacher services for students with special needs were not work-shopped before being launched. This is the same as the research findings in this study. As long as the key requirements for curriculum implementation are not provided, quality education is questioned and teacher effectiveness is compromised. Education systems should work to address such key issues to have effective curriculum implementation. The curriculum framework is a policy document that highlights the aims and goals of the curriculum. Teachers' understanding of the curriculum should be gained through having access to the policy document. That a good number of teachers did not have a copy of the curriculum reflects on their understanding of the curriculum as a whole and subsequently on its implementation.

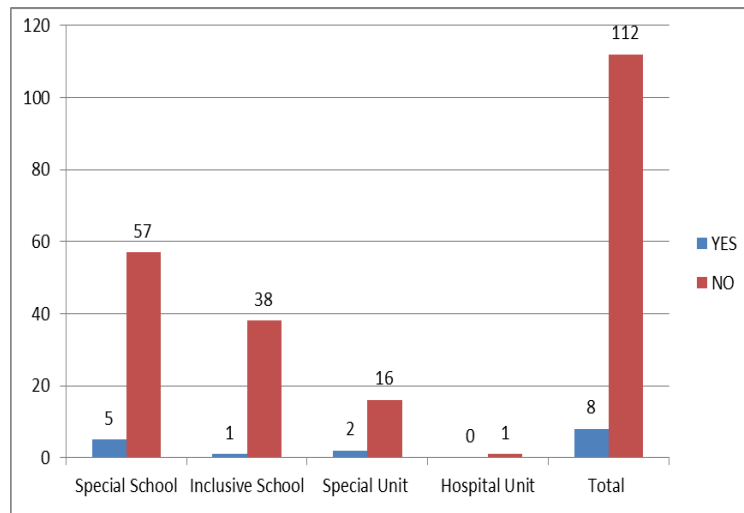
On the question to establish whether SETs were aware that they were obligated to adapt the curriculum to teach LSENs, no significant differences were reported by the Chi-square test ($\chi^2 (2, n = 120) = 0.88, p >.05$), (see Table 5.2). Most respondents from all three provinces were aware of their responsibility to adapt the curriculum. The results were not any different. The results show that an overwhelming majority of ($n = 101, 84.2\%$) were aware that they had a responsibility to adapt the curriculum to meet the learning needs of LSENs. However, ($n = 19, 15.8\%$) were not aware. Any assertion or assumption that there could have been differences in awareness depending on the province respondents were drawn from is rejected. It is expected that teachers understand what curriculum adaptation is, a question that was further asked in section C of the questionnaire that sought their understanding of curriculum

adaptation (*see appendice A (ii)*). SETs have an obligation to adapt the curriculum to suit the learning needs of LSENs. This question was asked to assess teacher respondents' preliminary knowledge of their obligations to adapt the curriculum. The question is connected to whether training on how to adapt the curriculum was provided. Without knowledge of adaptation, teachers cannot implement the curriculum as expected.

However, when respondents were asked about whether they were involved in CDP or not, the results show a lack of involvement of SETs in CDP with ($n = 112$, 93.3%) saying they were not involved while ($n = 8$, 6.7%) agreed to having been involved in the CDP. The difference between those who said 'yes' and those who said 'no' seems to be alarming. This simply shows a disparity in CDP. Such a difference prompted the researcher to run a Chi-square test of independence to determine whether there were significant differences in responses among the respondents or whether one or two provinces may have influenced the higher percentages. The results of the test showed ($\chi^2 (2, n = 120) = 0.27, p > .05$), meaning there were no significant differences because the p -value was far above the alpha level .05. No biased involvement could be insinuated because the results indicate that all provinces were not involved without significant differences. SETs were just not involved for reasons that this test could not establish. The results do not detect any form of bias established to favour one province or the other in terms of which province should have been involved in the CDP. The responses show a natural trend of lack of teacher involvement in the CDP.

5.2.3 Levels of Involvement

In the previous section, it was observed that teachers were not involved in the CDP and the lack of involvement was not related in any way to the provinces the different respondents were drawn from. Another test was run to see whether there were differences in terms of involvement of SETs according to the type of schools the respondents were drawn from. Thus, the types of schools where respondents were drawn from were inclusive schools, special schools, special schools with separate SE units and hospital units. Figure 5.2 shows the results of cross tabulation run to establish whether the SETs involvement in curriculum development could have been related to the type of school.



(p -value = 595 > .05) Missing value = 8

Figure 5.2.: Cross-tabulated graphical data of type of school and involvement in CDP (N = 120)

Thus, if an hypothesis were to be used, the hypothesis one (H_1) would be, “there is a significant difference between the types of schools from which the respondents were drawn and their being involved in CDP” and H_2 would be “there is no difference between the types of schools from which the respondents were drawn and their being involved in CDP”. The Chi-square test of goodness of fit was run simply to establish whether there was any preference for those who should have been involved in the CDP. However, the test results show a (χ^2 (2, n = 112) = 1.89, p > .05). There is no evidence of a relationship based on the type of a school where the SETs came from. Teachers were simply not involved. There is therefore no evidence for rejecting the null hypothesis. This survey therefore did not provide any evidence between the types of schools and involvement in the CDP.

5.2.4 Stages at which SETs were Involved

In order to be sure that SETs were not involved in the CDP, another question was asked to ascertain the stages in CDP at which they could have been involved. Respondents were required to state ‘very much’, ‘much’, ‘not much’ and ‘not involved’, at each of the stages of CDP namely planning, creation, implementation and reflection. Bivariate analysis with help of cross tabulations was run to compare each province and the stages at which SETs might have been involved.

5.2.4.1 Comparing involvement at planning stage between provinces

Respondents were asked to rate the level of involvement at the different stages of CDP. The following table shows the results.

Table 5.3

Comparing involvement at planning level

Characteristic	Category	Frequency & Percentage									
		Very much	%	Much	%	Not Much	%	Not Involved	%	Total	Total%
5.3. 1.											
	Involvement at										
	Planning Stage										
	<i>p-value = .211</i>										
	Lusaka	0	0	1	2.5	2	5	37	93	40	100
	Southern	3	7.5	0	0	6	15	31	78	40	100
	North Western	1	2.5	2	5	3	7.5	34	85	40	100

Source: *Survey Data*

** significant at 0.05 level*

The results show a confirmation that SETs were not involved in the CDP. From the results, SETs drawn from the three provinces mainly said they were not involved at planning stage. Higher percentages can be seen in the ‘Not involved’ column at (n = 37, 93%) for Lusaka, (n = 31, 78%) for Southern and (n = 34, 85%) for North Western Province. The Pearson Chi-square test confirms the finding that there were no significant differences between the provinces’ involvement at planning stage (χ^2 (6, $n = 120$) = 8.39, $p > .05$). This is in agreement with the results in Table 5.2 on involvement of SETs in the CDP.

The qualitative part of this study also confirms the quantitative results. The general view from ESOs was that teachers were not involved at planning and creation of the curriculum. Even ESOs themselves said they were not involved at those levels.

ESO12 said: “*a a a! No, the teachers for special education I think I didn’t see any being involved*”.

ESO9 said: “*okay...yaa well for the teachers, the only involvement that I know is that except again when we look at currently in (name)district none of our teachers with a bias toward special education has been involved in the developing materials...*”

Other responses were:

“aii....for(province withheld), I know the answer I will give may not be the same as in other provinces. In (names province), most of our teachers were not mostly involved, because if as standards officers we were not involved at that stage, I doubt if teachers were involved” (ESO7).

“I can say we were involved at creation stage, planning we were not involved. When they were reviewing anyway for special education I can’t remember when they but I attended the major one where there was a combination of I still remember there was one at DK, we had some sponsors I think from CDC, I was one of those people who were there, the general one but for SE I only participated in the one at creation stage because we were invited at CDC to look at the content, and then analyse the content we had made our own submissions” (ESO1).

Generally, both quantitative and qualitative results and findings show that SETs were not involved at the planning stage. It seems that the planning stage is a prerogative of the Ministry responsible for education just as CS1 said when asked about the involvement of SETs at planning stage:

“the planning part basically is done by the Ministry ... they are the only ones that are aware that the curriculum should be reviewed every 10 years like this one was implemented in 2013, so 10 years after that it has to be reviewed, the teachers are not aware of that the implementation is where they are very much involved.”

5.2.4.2 Comparing involvement at creation stage between provinces

Respondents were asked about their involvement at creation stage as well. Results are captured in table 5.4.

Table 5.4

Comparing curriculum involvement at creation stage

Characteristic	Category	Frequency & Percentage									
		Very much		Much		Not Much		Not Involved		Total	Total%
5.4.1. Involvement at Creation Stage <i>p-value = .236</i>	Lusaka	1	2.5	2	5	2	5	35	87.5	40	100
	Southern (Missing value = 2)	0	0	1	2.6	9	23.7	28	73.7	38	100
	North Western	1	2.5	3	7.5	4	10	32	80	40	100

*Source: Survey data*** significant at 0.05 level*

The results show the same trend, i.e. lack of involvement of SETs as it was at planning stage. This confirms the lack of SETs involvement in the CDP as a whole. The Chi-square test shows that there were no significant differences between respondents from the three provinces at p -value of $(\chi^2 (6, n = 118) = 8.03, p > .05)$. This means teachers were not involved at this stage without any assumptions that one province may have been more advantaged than the other.

5.2.4.3 Comparing involvement at implementation stage between provinces

There is a perception that teachers are mostly involved in the CDP at implementation stage, i.e. creating an impression that teachers are only but implementers of the curriculum and not the planners, or creators. This scenario was checked through this study to find out whether SETs were more involved at this stage compared to the other stages or not. Table 5.5 below shows the results:

Table 5.5

Comparing Involvement at implementation level

Characteristic	Category	Frequency & Percentage									
		Very much		Much		Not Much		Not Involved		Total	Total%
5.5.1. Involvement at Implementation <i>p- value = .017</i>	Lusaka	10	25	12	30	2	40	16	40	40	100
	Southern (Missing value = 2)	17	44.7	3	7.9	8	26.3	10	26	38	100
	North Western	15	37.5	7	17.5	10	8	8	20	40	100

*Source: Survey data*** significant at 0.05 level*

The results though show significant differences at (χ^2 (6, $n = 118$) = 15.52, $p < .05$) and the results demonstrate that SETs were involved at this stage more than any other stage in the CDP. This means that there was a significant relationship between implementation and the province SETs came from. Some SETs felt more involved in one province than the other. When the categories ‘very much involved’ and ‘much involved’ are combined, the mean frequency of involvement at implementation stands at 64 with its mean percentage at 54.2% and when the categories ‘not much involved’, and ‘not involved’ are combined, the mean frequency of those who felt they were not involved at implementation stage becomes 54 with a mean percentage of 45.8%. It is not clear what caused the differences but the understanding of involvement at implementation level might have been misunderstood. Some SETs may have understood the concept of being involved at implementation to mean getting trained, oriented or writing books while others may have thought it is the actual implementation in the classroom. This could have caused the differences. The general principle of involvement at implementation stage is the actual teaching of the new concepts of the revised curriculum in the classroom, which is a duty of every teacher. However, when teachers are not involved at the planning and creation stages, they are made to feel that they do not own the curriculum. Lack of involvement may cause such misunderstandings. The practice of involving teachers at implementation only leaves teachers in a state of ignorance on how best they can implement the ideas and concepts they were not part of making. ESO3 noted:

“I think at implementation we have been involved a little, but I think it would have been very proper if we were involved at all levels especially planning and development. Because you cannot be involved in implementation when you were not

involved in planning it becomes a problem because you have to follow whatever others say”.

ESO3 from the above verbatim noted the lack of involvement at the initial stages and that to be involved at implementation stage only is not enough. It seems not being involved at planning and creation stages of curriculum CDP is accepted as a norm. To think that planning is basically done by the Ministry endorses the responses that teachers gave. The model of curriculum design in Zambia seems to be the top-down model. Oloruntegbe (2011) bemoaned the top-down nature of curriculum development in some African countries as a problem that makes for limited involvement of the grassroots since the MoE takes responsibility of almost everything.

5.2.4.4 Comparing involvement at reflection stage between provinces

Reflection is an on-going activity that is expected to start soon after implementation begins. Reflection helps to see gaps in the designed product, in this case, the curriculum under implementation. Mechanisms should be in place to ensure that teachers provide feedback to curriculum designers about the curriculum under implementation. The researcher also set out to determine the extent of involvement of SETs at this stage. Table 5.6 shows the results:

Table 5.6

Comparing involvement at reflection stage

Characteristic	Category	Frequency & Percentage									
		Very much	%	Much	%	Not Much	%	Not Involved	%	Total Freq	Total%
5.6.1 Involvement at Reflection Stage <i>p-value = .133</i>	Lusaka	3	7.5.	3	7.5	3	7.5	31	77.5	40	100
	Southern (Missing value = 3)	6	16.2	3	8.1	8	21.6	20	51.4	37	100
	North	6	15	7	17.5	8	20	19	47.5	40	100
	Western										

Source: survey data

* significant at 0.05 level

The results show that most SETs are not involved at the reflection stage, just as for planning and creation. The results show also that teachers are not engaged in continuous reflection on

the activity under implementation. There were no significant differences in the results from the three provinces. The Chi-square calculation showed (χ^2 (6, $n = 117$) = 9.80, $p > .05$). This is the problem of top-down influence when it comes to curriculum development and subsequent implementation. They will always wait for instructions from the top. This has a negative impact on curriculum improvement.

When participants were asked to describe the nature of their involvement in the CDP, the majority ($n = 111$, 93%) did not answer the question while ($n = 1$, 0%) reported having contributed toward the drafting and implementation. Another participant said he/she was consulted on the views about the revised curriculum while three ($n = 3$, 0%) took part in the writing of sign-language books. These results still show lack of involvement of SETs at critical stages of CDP such as planning, creation and reflection. The low level of involvement of SETs also came out from qualitative findings. The qualitative findings show that even ESOs, who oversee professional standards of SETs, were not involved. All the 12 ESOs sampled for the qualitative part of the study showed mixed feelings about being involved in the CDP with most saying their involvement was only at implementation. Below are some of the extracts of what the participants' responses to a question on whether and how they could have been involved in the CDP:

“My involvement is a bit silent though there were consultative meetings because during the monitoring and evaluation the teaching learning process for teachers, we were advising the teachers, we were providing reports and also sending reports to various supervisors so in turn we are in a position to provide that necessary advice also to the policy makers which actually has actually made it possible for the curriculum to be at the stage it is today” (ESO9).

ESO12 was not certain of which stage she was involved at but said it was implementation:

“For me I was involved I think on, I don't know where I can put this one, it should be implementation, when we were training the teachers in the revised curriculum at least there I was involved in that training and the evaluation we have been going in the schools to see how the curriculum is implemented, we are trying to track the implementation and syllabus coverage”.

ESO2 said:

“I attended one meeting I think it was in Kafue, I think that was in 2014 when I was just coming in. I think they were explaining about the new curriculum, yes. I think I was actually involved there”.

The CSs in charge of curriculum design at CDC acknowledged the low level of involvement of SETs but stated that the SETs were involved. For instance, CS1 when asked about teacher involvement said:

“We deal with lecturers, certain organisations but teachers, those that practice, those that are typically in the schools or in the SE schools, those are always part of whatever we do we are always with them. so starting with the collection of data for ...curriculum reviews, they were on board, we went to the schools, again when we were trying to put things together, come up with some paragraphs, again they were there, again we are busy implementing right now we are trying tocome up with literature, books to use they are on board, even if someone retired, teachers and lecturers, we still consult them”.

Though the CS said the above, he revealed that the level of involvement was very low due to funding and inadequate personnel at CDC SE department. These challenges affected their functioning in terms of involving stakeholders in CDP.

CS2 also indicated that teachers were involved although she was quick to mention that she did not know whether they were involved at planning stage since she was not yet appointed to the position at the time. Below are her expressions about SETs involvement:

“Actually, you cannot do without them (SETs). They are the ones who are on the ground. We cannot get other people who do not understand these learners. So, in order to come up with this revised curriculum we had to involve the teachers. First the specialists will lay the draft, take it to the panel – technocrats, then we approve, we work together to suit the learners because they are the people who know them very well. eeee! When coming up with the syllabus, we involved them, when writing the books, they are the ones who are writing”.

While CS2 recognised the value of involving SETs as key stakeholders in curriculum development and says SETs were involved, the results collected from the survey show that they were not involved at many stages (see tables 2.5, 5.3, 5.4 and ESOs views).

Generally, the quantitative results and findings reveal that SETs were not involved in CDP except at the implementation stage. This scenario depicts the top-down model of curriculum development which in most cases leaves implementers stressed and ignorant about the implementation itself. The results of study are similar to many other international studies on teacher involvement in CDP. For instance, Oloruntegbe (2011), in a study of 630 teachers' involvement, commitment and innovativeness in curriculum development and implementation in Nigerian schools, 61.5% said they had never been involved while 38.4% agreed to having been involved. Though the results show a similarity with the Zambian CDP, the lack of involvement of teachers for LSEN is worse than that Oloruntegbe (2011) reported about the Nigerian situation. Further, Abudu (2016), in a study of basic teachers' perceptions about curriculum design in Ghana, found that the level of involvement of teachers in the process was very low. He further found that teachers had huge workloads, lacked expertise and faced problems of inadequate funding as some of the challenges that hindered teacher participation in the CDP. Similar findings were also established in South Africa through a study by Ramparsad (2010) conducted to ascertain teacher involvement at the different stages of the 2003 curriculum change. Ramparsad (2010) reported that teachers were not involved at design stage. Bao Duy (2016) reported that out of the respondents in the Mekong Delta, only 33% participated in CDP against 67% who did not. In Kenya, a top-down model of curriculum design was criticised by Bonyo (2012) who observed that the Kenyan education reforms did not involve the grassroot levels.

However, Halinen (2007) and OECD (2013) argue that teachers are experts with autonomy in planning and deciding their work. They deserve to be not only part of the CDP but need to own it. Ahmadi (2015) observed that in Nigeria, among the many factors affecting secondary school curriculum implementation is the non-involvement of teachers in decision-making and curriculum planning. Alsubaie (2016:106) noted, "If another party has already developed the curriculum, the teachers have to make an effort to know and understand it". This, in turn, stresses the teacher who has the responsibility to implement the curriculum. An effective curriculum is one that involves stakeholders from the grassroots. Such a curriculum reflects the life of the community. When teachers are not involved in the process, curriculum implementation is faced with numerous daunting challenges.

5.3 HOW THE CURRICULUM WAS BEING IMPLEMENTED

The previous section presented results and findings on SETs involvement in CDP. It is worth noting that involvement in CDP helps stakeholders better understand how the curriculum can be implemented. The results showed that SETs were only involved at implementation stage. ESOs also reported this although CSs said they involved several stakeholders including teachers.

This section presents results and findings on the major research question, “how are SETS implementing the 2013 revised curriculum to meet the learning needs of LSENs?” The research question was broken down into many sub-questions to help collect enough empirical evidence about the implementation process. Therefore, the first sub-question centred on how much teachers were prepared for the implementation; i.e. if there was training before implementation and what sort of training it was. Training is a very important prerequisite for effective implementation just like involvement. The other sub-question had to do with strategies and methods being used by SETs in the implementation process. Under strategies and methods used, key strategies used for implementation in SE were investigated. These are the concept of curriculum adaptation and the IEP.

5.3.1 Teacher Preparation for Curriculum Implementation

Table 5.7 shows a summary of results on the four questions from the questionnaire exploring:

- whether SETs teaching LSENs were trained in the revised curriculum or not (Q5.7.1);
- whether schools and SETs in particular had the alternative curriculum not (Q5.7.2);
- whether they had developed an alternative curriculum (Q5.7.3);
- whether SETs teaching LSENs were able to develop their own adapted curriculum in line with the main curriculum (Q5.7.4); and
- whether SETs were trained on how to adapt the curriculum or not (Q5.7.5).

Table 5.7

Comparing teacher preparation for curriculum implementation between provinces

Characteristic	Category	Yes	%	No	%	Somehow	%	Total	Total%
5.7.1. Were you trained in the revised curriculum? <i>p-value = .572</i>	Lusaka	20	39.2	10	24.4	10	35.7	40	33.3
	Southern	16	31.4	14	34.1	10	35.7	40	33.3
	North Western	15	29.4	17	41.5	8	28.6	40	33.3
	TOTAL	51		41		28		120	
5.7.2. Do you have an alternative curriculum? <i>p-value = .043</i>	Lusaka	13	28.3	27	37.5	X	X	40	33.9
	Southern	12	26.1	28	38.9	X	X	40	33.9
	North Western	21	45.7	17	23.6	X	X	38	32.2
	TOTAL (Missing value = 2)	46		72		X	X	118	
5.7.3. Have you developed an adapted curriculum? <i>p-value = .151</i>	Lusaka	11	24.4	29	39.2	X	X	40	33.6
	Southern	15	33.3	25	33.8	X	X	40	33.6
	North Western	19	42.2	20	27.0	X	X	39	32.8
	TOTAL (Missing value = 1)	45		74		X	X	119	
5.7.4. Do you or your school have adapted syllabuses? <i>p-value = .417</i>	Lusaka	10	43.5	30	31.6	X	X	40	33.9
	Southern	8	34.8	32	33.7	X	X	40	33.9
	North Western	5	21.7	33	34.7	X	X	38	32.2
	TOTAL (Missing value = 2)	23		95		X	X	118	
5.7.5. Have you been trained on how to adapt the curriculum <i>p-value = .257</i>	Lusaka	10	24.4	30	39.0	X	X	40	33.9
	Southern	15	36.6	25	32.5	X	X	40	33.9
	North Western	16	39.0	22	28.6	X	X	38	32.2
	TOTAL (Missing value = 2)	41		77		X	X	118	

*Significant at 0.05 level

Source: Survey data

(Note: X denotes not applicable to that field)

The results in the Table 5.7 do not show any significant differences except for Question 5.7.2 where some significant differences were noted. On whether training was conducted to prepare them for the revised curriculum or not, the results show dissatisfaction about the nature of training hence the divided result picture (n = 51, 43%) saying ‘Yes’, (n = 41, 34%) saying ‘No and (n = 28, 23%) saying ‘Somehow’. The Chi-square results for Table 5.7.1 showed (χ^2 (4, n = 120) = 2.91, $p > .05$), thus no significant differences were recorded between provinces and whether they were trained in curriculum adaptation. By use of frequencies and percentages, when ‘no’ and ‘somehow’ are combined, there is a larger frequency of dissatisfaction about training. It may also be true that some form of training occurred but not specifically in SE hence the ‘yes’ response (n = 51). Vallor, Kimberly, Yates and Brody (2016) propose the development of a guide to help implement curriculum and emphasise that such a guide would be better made by experts within the field in liaison with community experts. This is an area that requires exploration. Curriculum development should be the concern of local experts where opinions of people who live and know their environments and communities choose what is necessary for their children with disabilities to learn.

Qualitative findings actually confirm overwhelmingly that training was provided to teachers on the revised curriculum. This is good practice for implementation of a new curriculum. Training prepares teachers for effective implementation of the curriculum. However, the training was general and not specifically meant to orient SETs on the application of the new curriculum to LSENs. In SE, no training was offered to prepare SETs for the curriculum. For instance, CSs and ESOs were asked on how much preparation was done for SETs to implement the curriculum effectively. In this case, the researcher wanted to know whether there was training specifically for SETs to be able to apply the general curriculum framework to SE.

“That one was not done but we are going to do it as we are going to distribute the books, there is orientation, there is training, as we are distributing the books we will train them on the revised curriculum, we will train on the books developed and we will train them on how to use these grey materials. When we started orienting teachers, we just oriented every teachers not necessarily (on curriculum) the new, the revised curriculum sorry the revised, we oriented every teachers in every provinces not specifically for the SE needs but this can be done, this will be done when we will

distributing books because we have gone ahead. So when we are done with this they will be oriented” (CS2).

The other CS reported that training was done generally

“yeah, trainings have been going on, when you are training teachers for the new curriculum they also used to involve teachers ... they used to ... how to use these books but we are yet, after we have also adapted and revised specifically or books under SE, the teachers again have to be oriented on how to use these books. Yes, but they were already oriented in the general curriculum” CS1.

ESOs equally confirmed that trainings were conducted in general but not focused on orienting SETs toward implementation of the curriculum to LSENs. Below is an extract from the interview with ESO7:

“Ok, for the teachers of SE, they were actually trained as mainstream teachers not as teachers of SE because even as I am speaking to you right away, the material for SE for the implementation of the revised curriculum is not yet out not even a single book, even that road map they said by last 2016, the road map is supposed to end, for us in SE we have not yet even started, it’s just a modification of the mainstream curriculum that’s what they are using so it is a cause for worry actually, in short for me I was given chance to express that, teachers, especially if teachers have not been involved and what has happened is that the roadmap is not even there because we have not even started the roadmap, with our friends it started in 2013, for us up now, we are just using a modified curriculum, which is a danger to our learners”.

ESO8 said:

“I wouldn’t say there was a special kind of training for the teachers of SE, because the training was just the same kind of training I would say it was just an orientation which other teachers also underwent through. Yes, there was no other special kind of training for teachers of SE. Looking at our framework I think it didn’t have, it has no much part on SE alone....”.

ESO11 responded:

“There has been no training as such but two weeks ago when I met the PESO from HQs when we met in (place) said there would some trainings maybe probably they are just waiting for finances”.

When participants were asked how SETs were implementing the curriculum to LSENs when there was no training to prepare them for implementation, all ESOs expressed disappointment. Three strong expressions were as follows:

“It is actually an uphill battle, sir. Eee ... they are barely trying but they are not doing what is supposed to be done. Remember I am an education standard officer. There is a prescribed standard which we have already prescribed so there are a lot of challenges that the teachers are experiencing because in the absence of materials they are failing to adequately implement this revised curriculum in the absence of materials” (ESO6).

“That’s why am saying my brother it is difficult to see the change because we have not even started implementing, how do we see a change on something that we have not even started? I am telling you in SE, it is a disaster” (ESO7).

“Ok what the teachers are doing those in SE, they are using the same material okay the other teachers are using in the mainstream, for these which are from the revised and then adapt them adapt them to SE. Otherwise we don’t have, I can’t say we have in terms of teachers’ handbooks and for pupils’ books for SE, we have yet started” (ESO2).

Other ESOs also lamented that teachers were implementing the curriculum with a lot of challenges. In a nutshell, the results and the findings show that there was no special orientation or training specifically for SETs on the revised curriculum.

The results further showed that there was no alternative curriculum in schools and schools had no autonomy to develop adapted curriculum from the general curriculum. When a comparison was run through Chi-square test of goodness of fit, the results show a significant association between provinces and whether the SETs had an alternative curriculum. The results are $(\chi^2, (2, n = 118) = 6.30, p < .05)$ indicating that an assumption could be true that some provinces were given an alternative curriculum and not others. Thus, the $\phi = .231$. However, the relationship seems to be weak going by Cohen’s (1988) interpretation of the ϕ falling between 0.3 and 0.4, which shows a medium relationship, which possibly could have

occurred by chance because qualitative data showed to the contrary that schools did not have the alternative curriculum. Cohen et al. (2005) suggest that with correlations between 0.35 and 0.65, in fact around 0.40, predictions may be possible. This can be confirmed by literal percentage calculations of the overall results. All three provinces did not have the alternative curriculum. When all respondents are totalled, ($n = 72$, 61%) said they did not have the alternative curriculum while ($n = 46$, 39%) said they had. It is possible that some participants did not understand what an alternative curriculum is. CDC curriculum specialists reported that the alternative curriculum was not developed at the time of study. MESVTEE (2013) says learners with intellectual challenges would learn through an alternative curriculum. When asked about the availability of the alternative curriculum, ESO12 said:

“I haven’t seen it myself, maybe it could be me who is not exposed to it. Because so far I just have the syllabus which was given by the SESO, and am told that was a draft so it should have been the 2012, the 2013 I think I have the syllabi for all the grades, I didn’t see the syllabi for SE”.

ESO3 said:

“In fact, you are very correct to say if we look at this framework itself; yes, it actually points out that there are certain learners who are supposed to have an alternative curriculum, especially those with severe disabilities and the learners with intellectual disabilities. They don’t need to follow our curriculum, religiously the current curriculum, but it seems as I was saying may be due to lack of resources, we have delayed, we needed to have come up with an alternative curriculum for those learners then for other learners with mild and moderate”

Further, neither teachers nor the schools had adapted syllabuses from the general curriculum with Chi-square result of (χ^2 , (2, $n = 119$) = 3.78, $p > .05$). This shows no significant differences between provinces on having adapted syllabuses. When SETs were asked whether they had adapted syllabuses, the majority said ‘No’. Teachers and schools do not even have the autonomy to make their own adapted syllabuses from the curriculum framework because there is no legal provision that allows them to do so. The Chi-square showed (χ^2 , (2, $n = 118$) = 1.75, $p > .05$) showing no significant differences among the provinces. For instance, ($n = 74$, 62%) said they did not develop adapted syllabuses while ($n = 45$, 38%) said they had developed them, ($n = 95$, 81%) said their schools did have adapted syllabuses while ($n = 23$, 19%) said they had. As in this study, Kumar and Bhattacharya (2013) observed that among

the various challenges of implementing inclusive education in secondary schools in India was inadequate adapted curriculum. Krull and Viirpalu (2014: 64) found that teachers in Estonia lacked autonomy “to create their own instructional materials and need more materials, examples and methodologies to choose those that are the most appropriate and suitable to their needs”. If teachers had the autonomy, the NCF could have been adapted into simplified guides by teachers depending on their local contexts. But as it stands, the top-down model of CDP does not allow for teachers to take such initiative to help them effectively implement the curriculum.

The results show that it depends on individual schools and teachers to find ways of implementing the revised curriculum. But this does not mean schools and teachers were able to adapt the curriculum to needs of LSENs. The failure by schools and teachers to develop adapted syllabi from the main curriculum shows the top-down manner of curriculum administration. While teachers have some knowledge and skills they obtained from teacher-training institutions on how to adapt the curriculum, the revised curriculum came with new concepts which teacher-training institutions had not even started implementing in their teacher-training curricula. Thus, the need for training of SETs in the revised curriculum was cardinal for effective implementation. However, the results show that there was no training on how to adapt the curriculum ($n = 77$, 69%). Although ($n = 41$, 37%) said they were trained in curriculum adaptation, a follow-up question asked to determine the nature of training revealed that teachers were using their knowledge and skills from colleges and universities where they trained. These findings are similar to what Okoth (2016) discovered about the challenges of implementing a top-down model of curriculum among Form III English Language Teachers in Kenya. Okoth (2016:173) reported that:

most teachers interviewed voiced the lack of appropriate professional development as frustrating implementation of the integrated English language curriculum. The participants argued that the curriculum was introduced rather haphazardly with teachers ‘scantily knowledgeable’ about integration and its objectives and hardly equipped to handle it.

Teachers need to be prepared to implement new ideas that come with a new curriculum. Depending on college or university training leaves teachers working on a trial and error basis. The following extracts from teacher respondents demonstrate that they literally depended on their college or university training to implement the revised curriculum;

“I was trained at ZAMISE on how to come up with the curriculum for learners with learning disabilities using the ordinary curriculum” SET 15.

“Teaching methods from ZAOU” SET 22 & 25.

“Teaching methods from the University of Zambia” SET 20.

“Just a component in primary school certificate through psychology”. SET 2.

The failure to train teachers for SE on how to adapt the curriculum can make them skeptical on how best they can adapt the curriculum. Some studies have established that teachers usually feel unconfident about teaching new content unless they are prepared to do so. A study by Thompson, Andreae, Bell and Robins (2013) on the role of teachers in implementing curriculum changes found that teachers had relatively low confidence levels in their ability to teach the new topics in computer science introduced in New Zealand schools in 2011. In the study, only 64% of those who taught the programming standard reported that they felt a positive level of confidence about teaching it; and only 44% of those who taught the computer science standard (algorithms, programming languages and HCI) expressed confidence. In Zambia, the 2013 curriculum framework has introduced computer studies as a subject. However, teachers may not be prepared to teach the subject yet because they have graduated from colleges without taking computer studies as one of the subjects. Even the results of this study reveal teachers complaining that they were unable to teach computer studies to learners with HI because the technology was either inadequate or not available. Even, then, teachers were not skilled to teach computer studies. The results agree with what Mulenga (2016) established in Ndola schools that the implemented the 2013 curriculum in which computer studies was introduced faced challenges implementing. Mulenga said the challenges included lack of computers and accessories, poor set up of computer laboratories and lack of trained teachers in computer studies among others.

Another example related to teacher preparedness in SE is the case of sign language. A new curriculum comes with new terminologies that teachers are supposed to be aware of before implementation. As the situation stands, studies on Zambia’s education system reveal that SETs have limited skills in sign language. Literature reviewed for this study established that there were many teachers teaching LSENs in inclusive schools that were not trained in SE (Chakulimba et al. 2014, Ndhlovu 2008). The current study confirmed this. MESVTEE (2014) acknowledged that one of the challenges facing teaching and learning of learners with

HI's was lack of sign-language skills among trained teachers. Adebile and Foluke (2009: 294) warn that "many laudable educational initiatives have failed mainly because they did not take due account of the 'teacher factor' especially when it has to do with the language of instruction and effective means of implementing the curriculum". Though the main aim of this thesis is not to debate the language of instruction policy introduced in the 2013 curriculum framework, challenges have been observed in the implementation of the curriculum to learners with HIs. Findings indicate that teachers were facing challenges signing certain terms especially in Science, Mathematics and Social Studies because there was no vocabulary developed for such terms. These challenges are presented in the section on challenges teachers were facing in curriculum implementation. At the time of the study, learners' and teachers' books were not yet available in sign language. With the different varieties of sign language in a Zambian multi-lingual society, this poses challenges for the provision of quality education especially for learners with HI. Not until these challenges are addressed with the urgency they deserve, quality education for LSENs remains questionable under the 2013 curriculum.

5.3.2 Understanding the Concept of Curriculum Adaptation: Quantitative Results

The second research question was to establish how teachers were implementing the curriculum. The researcher collected both quantitative and qualitative data to explain how the curriculum was being implemented. When teachers are not involved in a process such as curriculum development, implementation may be faulty or hampered by numerous challenges. Curriculum implementation in SE is characterised by adaptation. Curriculum adaptation is a key concept in the provision of SE to LSENs. It provides access to the general curriculum. In the previous section, results showed that there was no specialised related training for SETs. The lack of involvement was voiced as an assumption and has been proven. However, the study went further to establish how SE teachers were adapting the curriculum for LSENs during implementation. To do this, the researcher wanted to first establish the respondents' understanding of the concept of curriculum adaptation for LSENs. Five questions in the questionnaire were deliberately directed toward assessing respondents' understanding of the concept of curriculum adaptation and how it was being applied during implementation. The assumption was that when stakeholders are not involved in CDP, their understanding of the process is limited. Respondents were required to explain the concept of curriculum adaptation; explain the nature of training if any received on curriculum adaptation for LSENs; list ways in which they were adapting the curriculum to meet the learning needs

of LSEs; and identify at least three very good learning aspects introduced in the new curriculum that would benefit LSEs.

The questionnaire, which mainly collected quantitative data had some questions that solicited explanations as well. While some of the qualitative responses were analysed qualitatively, others were quantified. The researcher identified the variables and quantified them in order to make a comparison with the qualitative interpretations. This type of analysis is supported by Connolly (2007: 16), who acknowledged that:

there obviously be times when you need open ended questions (i.e. a question that is followed by a space where the respondent writes down their answer in their own words). However, you need to bear in mind that you will have to go back and translate these qualitative answers into codes at some point if you want to analyse them quantitatively.

A Pearson's Chi-squared test of goodness of fit and a bivariate correlation of variables were applied to see whether there were significant differences and relationships between the provinces where the respondents were drawn from, their qualifications, specialisations and the response to the concept of curriculum adaptation. Table 5.8 shows the results.

Table 5.8

Comparing provinces, qualifications and specialisation with understanding of curriculum adaptation as a strategy for curriculum implementation

Characteristic	Category	Response									
		Correct		Partly Correct		Incorrect		Did not answer		Total	
		F	%	F	%	F	%	F	%	F	%
5.8.1. Province ($r = .082$; p -value = .000).	Lusaka	18	45	5	12.5	10	25	7	17.5	40	100
	Southern	2	5	6	15	26	65	6	15	40	100
	North Western	23	57.5	4	10	6	15	7	17.5	40	100
	TOTAL	43	36	15	12.5	42	35	20	17	120	100
	Certificate in SE	1	25	0	0	3	75	0	0	4	100
5.8.2. Qualification ($r = .267$; $p = .000$).	Diploma in SE	23	51.1	5	11.1	7	15.6	10	22.2	45	100
	Degree in SE	14	53.8	2	7.7	7	26.9	3	11.5	26	100
	Masters in SE	3	30	3	30	1	10	3	30	10	100
	Other	2	5.7	5	14.3	24	68.6	4	11.4	35	100
	TOTAL	43	36	15	13	42	35	20	17	120	100
5.8.3. Specialisation ($r = .337$; $p = .000$)	Specialised	40	49.4	10	12.3	17	21	14	17.3	81	100
	Not specialised	3	7.7	5	12.8	25	64.1	6	15.4	39	100
	TOTAL	43	35.8	15	12.5	42	35	20	16.66	120	100

Source: Survey data

* significant at 0.05 level; (F = Frequency)

The results showed significant differences between province, qualification, specialisation and the understanding of the concept of curriculum adaptation. For instance, for question 5.8.1., the Chi-square relationship showed a significant association between provinces and the SETs' understanding of curriculum adaptation as a strategy for implementing the curriculum. The Chi-square test yielded (χ^2 (6, $N = 120$) = 33.29, $p < .001$) (see question 5.8.1. for the p-value). This result is so strong that it could not have occurred by chance. The (ϕ) run to confirm the strength of the relationship gave ($\phi = .473$), meaning the relationship when translated using Cohen (1988) scale means the relationship is large. This confirms the calculations by frequency and percentage results which showed that more SETs in Southern Province did not understand the concept of curriculum adaptation compared to Lusaka and North Western Province SETs. The results further showed that North Western was superior in understanding the concept while Lusaka was second. Ntumi (2016), in a study of the challenges of preschool teachers in implementing the preschool curriculum in the Cape Coast

Metropolis, found that among the many challenges was teachers' failure to understand the ECC curriculum itself. Further, a study by Shanzi (2016) revealed that although special education teachers in selected special secondary schools in Lusaka and Chipata were able to identify areas of the expanded core curriculum, they showed lack of understanding of the term expanded core curriculum for the visually impaired. This lack of understanding key concepts in SE raises questions about the quality of SETs.

On qualifications and specialisation, the results showed significant differences. For instance, question 5.8.2 shows how significant the results of qualifications and the understanding of curriculum adaptation were at ($\chi^2 (12, N = 120) = 41.75, p < .001$). Thus, respondents who had qualifications in SE were likely to get the questions on curriculum adaptation correct compared with respondents without qualifications in the field of SE. A bivariate correlation run to determine whether there was such a relationship established a positive relationship ($r = .267, p < .001$). The strength of the relationship is fixed at ($\phi = .590$), which is a very strong relationship.

Further, the specialisation of the respondents also yielded positive correlation with understanding of the concept of curriculum adaptation at ($\chi^2 (3, N = 120) = 26.81, p < .001$), and $r (120) = .337, p = .001$). The ($\phi = .473$) also indicates that the relationship is strong between specialisation and the understanding of the concept of curriculum adaptation. Gaur and Gaur (2009) note that bivariate correlations test the strength of a relation between variables; the test does not provide further information on other variables that may cause interference in the relationship. Correlations only indicate the relationship between variables and not the causal relationship. The results demonstrate the value of qualifications and specialisation in a field of study. Those with diplomas and degrees in SE explained the concept of curriculum adaptation for LSENs much better than those that were trained in other institutions of teacher education having only a component of SE. These results send a signal to current teacher-education institutions to intensify the delivery of content and skills for SE if graduate teachers are to handle LSENs in inclusive schools. The curriculum framework 2013 makes very strong demand on teacher education to have SE taught as a course with emphasis on braille and sign language as specialised areas. Once this is implemented, graduates may equal those trained in specialised institutions and would ably teach LSENs in inclusive schools. It must, however, be noted that the knowledge about curriculum adaptation for LSENs and what it involves does not mean that SETs were practising all that they

reported. For instance, findings from observations of teachers reveal that specialised teachers were better at teaching LSENs than those in inclusive schools, though they equally could not produce IEPs for the LSENs they taught.

The confirmatory model of analysis supports researchers' consideration of different ways of analysing data in order to get fuller understanding of the data collected. Connolly (2007) advises against researchers thinking that quantitative analysis is all about descriptive statistics. Researchers using the quantitative approach or mixed-methods approach should be able to compare data relationships and provide meaningful usage of the data from detailed analysis. Using the confirmatory model, the researcher then used another analysis technique of calculating the means and standard deviation per province of the responses that gave significant correlations in Table 5.9. The following were the results:

Table 5.9

Means and standard deviation about understanding curriculum adaptation compared by provinces

Characteristic	Category	Mean	N	Std. Deviation
	Lusaka	25.475	40	24.09488
	Southern	18.5	40	18.47382
	North Western	33.75	40	21.91914
	Total	25.9083	120	22.33285

The mean grade for all the three provinces was 26%. The overall mean grade of 26% is close to the standard deviation 22.33. This means when the standard deviation is added or subtracted to and from the mean, the results show that the highest was still below 50% (i.e. 48%) while the lowest would be at 4%. This (4%) is too low to speculate about the quality of a teacher who does not understand what curriculum adaptation is and what really changed in the curriculum. When the means are compared between the three provinces, the results show the same trend as early analysis from cross tabulations which revealed North Western performing fairly far ahead followed by Lusaka and Southern Province. It can therefore be confirmed that the respondents had minimum understanding of the concept of curriculum adaptation.

The results confirm the analysis done in Table 5.8. They do not portray a good picture about the understanding of the concept of curriculum adaptation and subsequent implementation. It can be deduced from the results that there is need to pay attention to qualifications and specialisation to address quality issues in SE. If teachers are to adapt the curriculum thoroughly, there is need to invest in the upgrading of their qualifications and specialising in the field of SE on one hand and equipping those teaching in inclusive schools with basic knowledge and skills on the other hand.

5.3.3 Understanding the Concept of Curriculum Adaptation: The Qualitative Perspective

Qualitative responses also indicate that participants (SETs) had limited understanding of the concept of curriculum adaptation for LSENs. SETs also failed to show understanding of how the previous curriculum was different from the current curriculum and ‘good’ learning aspects introduced in the revised curriculum for LSENs. The following were some of the responses to questions that required them to explain what curriculum adaptation for LSENs is;

- *“Familiarising with the curriculum”* SET 13.
- *“Fitting in with the curriculum”* SET 12.
- *“Is just accept the curriculum the way it has come”*. SET 38.
- *“Changing from the old to the new curriculum”* SET 28 & 29.
- *“Formulating the curriculum according to the changes taking place”* SET 3.
- *“New knowledge of teaching”* SET 23.
- *“Is the accepting the change in the curriculum”* SET 14.
- *“Being part of what the curriculum requires”* SET 37.

From the qualitative perspective, the responses when amalgamated showed that Lusaka respondents had a better understanding of the concept of curriculum adaptation for LSENs, and the ways in which they were adapting the curriculum compared with Southern and North Western provinces’ respondents. A case node comparison chart query run in NVIVO confirms that there were more inappropriate responses to the concept of curriculum adaptation in Southern and North Western provinces. Figure 5.3 below shows the coding density.

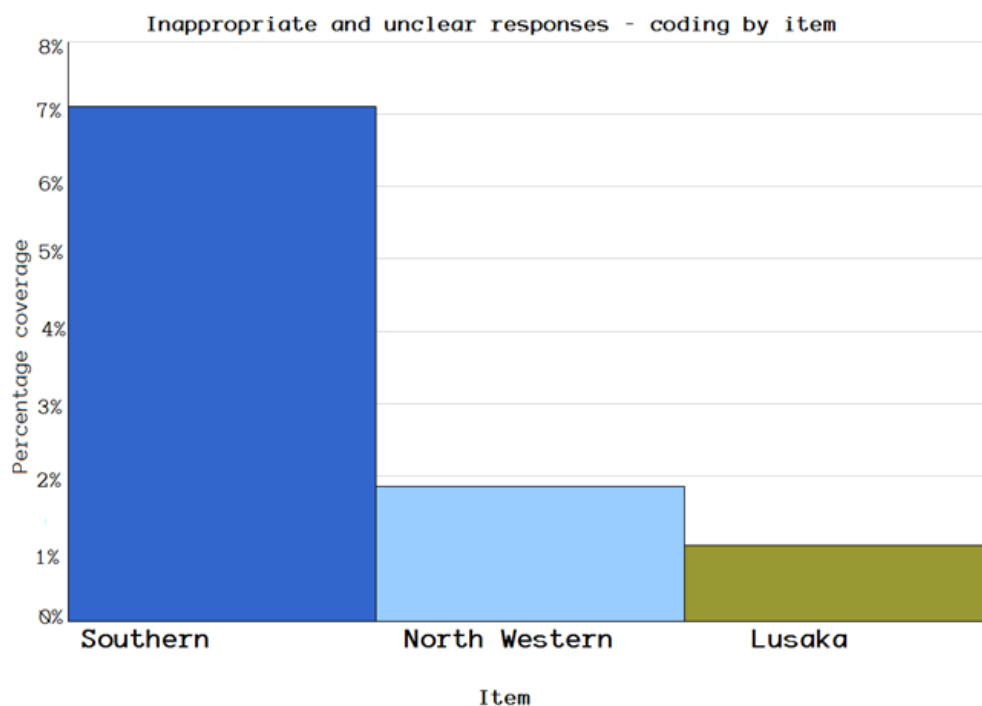


Figure 5.3: Nvivo coding density of inappropriate responses about curriculum adaptation

Understanding the concept of adaptation is critical to implementation of the curriculum in SE. Comparatively, even though teachers showed limited understanding, to some extent, even some Ministry officials themselves in charge of the development of the curriculum seem not to understand the revised curriculum very well. For instance, one of the MoGE officials responsible for curriculum was asked to briefly explain to the researcher how Mathematics was adapted for the intellectually challenged. The response was; “*We don’t adapt Mathematics, its only literacy. Mathematics we develop our own to suit our own. So, we develop our own work*” (CS2). However, MESVTEE (2013) states clearly that a carefully adapted set of outcomes for the intellectually-challenged learners must be used from the syllabuses of learning areas which include Mathematics: this subject is allocated 3 hours 20 minutes during a week. The concept of adaptation seems to be understood in the context of translating books into sign language and braille yet there is more to it.

There seems to be reductionism in the application of the concept of adaptation for LSENs. MESVTEE (2013) recognises that there should be an adapted curriculum and adapted technology for LSENs. However, the concept of curriculum adaptation seems to be reduced to simply transcribing books into braille for the VI learners and into sign language for the HI. CS2’s answer to the question as to whether there were guidelines that would help teachers adapt the revised curriculum when teaching LSENs was:

“no sir, on adaptation.. huu...., it’s us as CDC who are doing the adaptation with the teachers we are working with in the field so that we can have uniformity wherever it will go. It will be the same books but different languages, like literacy we have got Chitonga, Chinyanja”.

When the same question was asked to ESOs as to whether there were guidelines available to help teachers adapt the curriculum to the level of LSENs, ESO3 said:

“The guidelines are there, in fact adaptation is being done right now even in SE. The HI people at CDC they have done a lot of adapting; actually, there are the books. Yes. They are also adapting the same books in braille. So, adaptation is going on but at a very slow pace while our colleagues they have already adapted. They have produced new books as we are now, those new books which have been produced now we are adapting them, writing them to the language of our children”.

When the researcher asked whether the adaptation meant books or even simplifying, omitting content not applicable for certain categories of learners, ESO3 said:

“Exactly, that is the adaptation which is there, they are just translating, not that we are changing anything. If there are any changes we are actually following the same changes which are there for the ordinary learners”.

Since this was the only respondent who said the guidelines were in place on how to adapt the curriculum, the researcher wanted to know whether they were in print explaining how a teacher would handle a topic when teaching a child with intellectual disabilities. This is what the ESO3 said in response:

“That is what we don’t have, and that is what we need to do and we expected that to be done not by headquarters but by teacher trainers. What we expect is a situation where colleges of education who train teachers and universities when they are teaching how to teach for example maths, once they teach this is how to teach this may be topic, at the end of the day they need to say, but when you are teaching, a learner with hearing impairment or visual what, you are supposed to do is this, this is the adaptation which we need. It is supposed to be this way and that is where as you are saying, that is the adaptation which we need. But it is not supposed to be done at headquarters. No, it is supposed to be done at teacher education level and we expected ZAMISE and universities which are having SE to do that. Unfortunately, what is happening is, the adaptation which we have talked of just translating being done by CDC. The teachers who are coming from universities and colleges of

education they have not been taught how to handle these children to say, if you are teaching this topic, you handle them this way”.

The findings show a low understanding and application of the concept of adaptation. Such kind of reduction in conceptualising the concept presents underutilisation and under application of the concept in teaching of LSENs. For instance, Pierangelo and Giuliani (2008) propose that adaptations for LSENs should include environmental adaptations, presentation of material, pace of activities, alternate methods, material adaptation, assistance to students, and adapting the assessment process. Mitchell (2008) proposed computer responses instead of oral responses, substitution (e.g. braille for written works), omission (e.g. omitting very complex work), compensation (e.g. self-care, vocational skills), all related to content, teaching materials and the responses expected from learners. With clear guidelines based on the different types of disabilities, teachers should be able to effectively implement the curriculum by providing content of the right level for LSENs. With guidelines in place, certain topics can be substituted or omitted. For other topics, the level can be reduced. When such a guideline is in place, SETs throughout the country would implement the curriculum in a reasonably similar manner though slight differences may occur due to different localities and experiences. Otherwise, the way things are, each teacher is left to do what they feel is right to implement the curriculum.

While it is acknowledged that teacher-training institutions should be involved in adapting content, methods and other required areas, learners’ books and syllabi should first be adapted. For instance, an intellectually-challenged learner would not need the same content as the so-called normal learner. There is need for reading and Mathematics content for their level. There are certain topics that learners with VI and HI experience difficulties in understanding. It is not within the jurisdiction of a teacher to eliminate such topics when an examination will be given to all learners based on all topics in a non-adapted syllabus. If schools were given the mandate to prepare and administer their own examinations, SETs would find it easier to prepare what is appropriate for LSENs. However, exams in Zambia are centrally prepared by the Examinations Council of Zambia (ECZ). All learners write the same examinations. Usually the examinations are not differentiated in terms of the level of complexity. However, teachers observed in this study reported that there were topics like colours which were difficult to teach the VI, abstract topics like ‘sin’ in religious education; terms found in Science or Geography topics such as “states of matter”; or mathematical concepts such as circumference were given as examples. Once materials are adapted, teachers would be left

with adapting methods, strategies, learning pace and other aspects. The failure to adapt teaching and learning materials has an impact on the implementation of the revised curriculum. As the situation stands, SETs are not trained in the revised curriculum and rely on the content they learn from colleges and universities that train them on the old curriculum.

Further, it is understood that universities and colleges of education have the responsibility to teach trainee teachers how to adapt the curriculum but the revised curriculum came into force before universities and colleges of education revised their curriculum to be in tandem with the school curriculum. This is another mismatch. Teacher-training institutions should not be left behind. If anything, curriculum change should start with them. To date, it appears that colleges of education and universities have not yet aligned their curriculum to the 2013 curriculum. In such a case, the responsibility of CDC, since the institution has adopted the top-down approach to curriculum development, is to provide guidelines alongside the revised curriculum or curriculum materials to help teachers implement the curriculum. In any event, universities and colleges of education do not produce syllabuses and learners' books. Simplified content, methodologies, strategies for teaching LSENs differently should be reflected in the adapted materials. And the CDC has that responsibility to facilitate but it appears even the top-down model of CDP being followed by CDC has a lot of gaps. Stakeholders such as teacher training institutions for instance are still training teachers based on old curriculum. Curriculum has three critical levels at which it should be adapted for LSENs. Figure 5.4 suggests the critical levels at which curriculum should be adapted to suit LSENs.

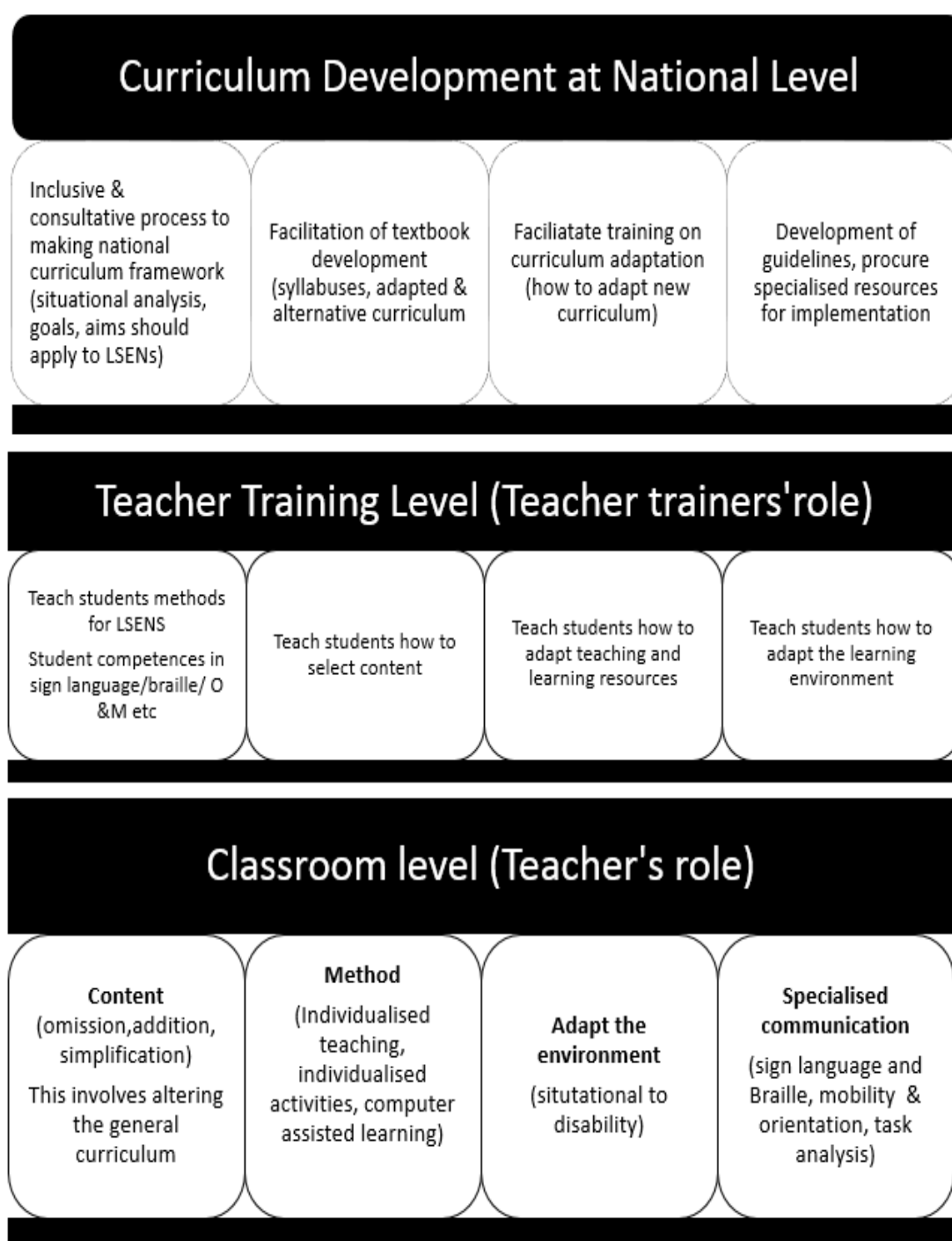


Figure 5.4: Suggested levels at which curriculum can be adapted

Figure 5.4 illustrates three critical levels at which curriculum should be adapted and what should be involved at each level. At the very first level, consultative needs assessment is critical to determine gaps and the need to revise the curriculum. Curriculum change or revision should reflect the society's needs. At the uppermost level, frameworks are created reflecting national goals, aims and objectives but there should be support materials that need to be developed to explain the framework. Technocrats facilitate training packages and guidelines and procure specialised materials. Unfortunately, even if the CDC in Zambia practises the top-down model, there are still gaps even at top level. For instance, this study established that the development of learning materials and syllabuses, in most cases, was behind the implementation itself. However, for the teacher to function effectively within the classroom, he or she needs the resources, the time and the motivation to work effectively. The teacher may have learned sign language in college or university, but the new books coming with the revised curriculum have new terminologies which require signs. If the teacher is engaged in finding the appropriate signs during implementation, learning would be delayed. Indeed, this study established that teachers had no adapted curriculum, alternative curriculum, adapted technology, syllabuses and learners' books among other necessary material for implementation. Since there has been no orientation specifically relating the revised curriculum to SE, teachers have to depend on the skills they acquired during university or college training.

The next level of adaptation of the curriculum is the teacher training level. At the teacher training level, while curriculum is being developed, teacher education institutions should be abreast of any anticipated changes that CDC is planning. Teacher education institutions should tailor and factor in new and modified concepts or remove what may be outdated from the teacher training curriculum informed by research. Thus, they should prepare teachers on methods, skills, how to select content, and how to adapt teaching and learning aids and the environment for LSENs. They should provide guidance to curriculum designers on what content is appropriate for different learning levels of LSENs. Teacher education institutions should also be resourced in terms of new technologies that the anticipated curriculum may require.

This is to assume that if the projection of CDC is to revise the curriculum in each 10-year period, teacher training institutions should be able to prepare teachers with skills in the new curriculum within that same ten years and prepare new teachers-in-training for the next round of curriculum reform. This means the teachers that will be implementing the projected new

curriculum must be up to date with the change. If anything, new materials developed for a new curriculum should first be used by teacher education institutions before they are implemented in schools. This explains that while the trainee teacher is at college or university, he or she should have access to the general curriculum and the materials necessary to implement the curriculum. The student teacher will be able to relate what he or she learns to what is in the materials provided. It would be a strenuous experience for graduate teachers to begin to read new material they would find in schools because they did not have access to such materials while studying. When students are exposed to curriculum materials during training, they become experts in their fields.

Refresher courses and retraining of teachers that are already serving should also take place within the same period before a new curriculum is introduced. In an ideal situation, it is assumed that teacher training institutions would at all times be aware of what CDC is planning to do or is doing in curriculum development. In any case, CDC should benefit from research that universities conduct and use such research findings to further investigate the need for change. CDC must in turn be aware that teacher-education curricula are aligned with the changes they (CDC) are putting in place. If this is not in place, the new curriculum should not be implemented. Unfortunately, this did not happen prior to the implementation of the 2013 curriculum. At the time when the curriculum was being implemented in 2014, and at the time when data for this study was being collected, teacher-training institutions had not yet started graduating teachers with the skills to implement the new curriculum. As was discussed in the literature review, MoGE released a circular calling on colleges of education and universities offering teacher education programmes to align their curriculum to the newly-revised curriculum in December 2015 (MoGE 2015a). But at the time of compiling this report, universities had not even started responding to the call to align the curriculum to that in schools.

The most critical level of curriculum adaptation is the classroom level. At classroom level, the teacher must implement the curriculum. The teacher at the classroom level is at the grassroot level. He or she is expected to identify the weaknesses and strengths of a curriculum. Well trained teachers can initiate curriculum change through teaching and evaluations they do on a daily basis. They know what works and what doesn't. The teachers' ability to do this effectively is dependent on how he or she is prepared by the curriculum development level and most importantly by the teacher training level. The effectiveness of such a teacher is also largely dependent on his or her participation in the CDP as a whole. A well-prepared teacher would provide valuable feedback on the curriculum for further improvement. This is why it is important to take into account teacher qualifications as well.

At this level, well-prepared teachers have the content, skills, methods and knowledge to manipulate the classroom environment. But they may not have the resources to improve the learning environment infrastructure per se. These still need to be provided to make them more effective. They need the resources, the time and the support to propel learning to higher levels. For instance, the teacher needs the curriculum framework as a key reference, the syllabi, the teachers' handbooks, learners' books, computers and the skills to use those computers for teaching and learning. These materials are expected to be provided by the ministry. Otherwise, where teachers are empowered with skills, knowledge and autonomy to develop school-based curriculum and materials, the lack of materials would seriously hamper teachers' effectiveness. Nevertheless, having a bottom-up approach has its implications especially for developing nations. It is expected that schools should have the ability and capacity to produce their own materials. This requires material and financial resources to enable schools to implement the curriculum. This is possible in highly-developed countries where decentralisation in curriculum development gives the teacher the space to operate. In such cases, even curriculum change is pioneered by teachers themselves because they live with the realities of their communities. This study, however, established that SETs were implementing the curriculum without training on the new curriculum and without resources, raising questions on the quality of such implementation especially for LSENs.

5.3.4 How SETs Understanding of the Curriculum Change Compares with ESOs

ESOs oversee curriculum implementation in Zambian schools. They are agents of curriculum implementation. But this study found out that generally ESOs for SE, like SETs were not involved at most stages of CDP except at implementation. However, ESOs' understanding of the background to the curriculum change, the strengths of the revised curriculum and understanding of curriculum adaptation was better than that of SETs. For instance, table 5.10 shows a summary of what ESOs reported as differences between the old and the revised curriculum.

Table 5.10

Summary of ESOs' understanding of the revised curriculum

OLD CURRICULUM	REVISED CURRICULUM
Content parked	Skills parked/practical
Sign language not taught as a subject	Sign language taught as a subject
Braille not taught as a subject	Braille to be taught as a subject
No adapted teaching /learning aids	Expected adapted teaching and learning aids
Un-adapted syllabuses	Expected adapted syllabuses

OLD CURRICULUM	REVISED CURRICULUM
No sign language and braille skills among trainee teachers	Teacher education curriculum will involve sign language and braille training
No focus on ICT for learning purposes	Focus on ICT for LSENs for learning purposes

Table 5.10 showed that ESOs understand the curriculum change. The following are a few selected verbatim extracts from ESOs:

ESO6 showed his understanding of the background by providing an analysis of the curriculum.

“Here we are having two career path ways, the academic pathway and the vocational pathway. It is against the background of realising that our academic system, our education system per se had been too academic meaning it has been too bookish. We have not emphasised so much in terms of skills. So that is why the vocational is coming in and you realise that children with SE needs have challenges in the academics. Now the idea of bringing in the technical or vocational aspects resonates very well with our children with SE needs who may not do well in academics. Now while the government has provided that framework, the implementation has a number of bottle necks”.

ESO7 said:

“Ooooo!there were actually a lot of issues that led to the change of the curriculum. Eee one of the issues that came out clearly was the type of curriculum that we had was actually very bookish, it was too theoretical in the end, graduates that came from school at various levels actually had nothing except to wait for white collar jobs, so I think that was one of the issues that came out clearly. Then the other issue that came out was the issue of the changing trends in the world, (researcher agrees along ok ok) that also had some influence because they realised some of the courses that they were talking of, for example book keeping, it actually ...it was the kind of book where even after being trained if you went into the society you be doing things which were not there and also typing, book keeping and typing so there was actually to need to meet the modern trends. Another reason was something that had to do with acquiring of skills”.

ESO3 provided the following detail of the change:

“What I know about the curriculum is that.... The curriculum itself has determinants and one of the determinants is the economy of the country, and also the other determinants is the learners and one of the changes which are taking place, now looking at the changes which are going on, the whole world looks to be academically changing, technology is changing, and it entails that all things being equal, the curriculum should also change, and for us as a country, I think there was need for us to change because the old curriculum seemed to have been training our learners for white collar jobs now, as a country, we have realised we do not need people to white collar jobs. We need people who are supposed to be skilled oriented, who can stand on their own. And I think that, that is one reason which made the curriculum to be revised, and also, uhh there are new courses which have come, like computer studies, everyone is turning computer so it was realised that we cannot run away from that, our learners are supposed actually to know how to work with computers”.

The same understanding was demonstrated by CSs responsible for SE at CDC.

CS1 said:

“.....for instance now we are living in the computer book kind of world, so somehow children need to learn curriculum related to ICT we have seen that braille skills have gone quite low and it helps, the assumption is that if they can know braille so well, they can transfer these skills also to other subjects like Biology and Mathematics”.

Generally, though participants were not satisfied with the stakeholder involvement and the implementation process, they lauded the curriculum framework as a well-intended document that would be applicable to LSENs if well implemented. Participants said:

“The intentions were very good in fact for us in SE, for a very long time that is what we have been crying for, the introduction of subjects which are very practical, which can make our children dependent on their own, instead of depending on others. I think for me the intention was very good. It’s the implementation which I think has been not to our expectation. There is very little in the implementation which can be of benefit to our learners. Yes. Otherwise the programme itself and the change was necessary. It is benefiting those who are, the hearing learners I think there is a lot they are benefiting yes” (ESO3).

“It was very necessary because most of our students would not go beyond grade 7, for example here in (place withheld) the school that we had was just for the HI, and when they reach grade seven they sit for the exam after passing they were required to go to

(place withheld) of which some parents were not managing, you find most of them will just end at grade 7 level, they are in the village, so with this curriculum of equipping them with skills” (ESO12).

“Especially the vocational really favours most of our children especially those with learning difficulties. Yes yes, these vocational skills, actually the teachers are saying will help the children with SE needs to live independently. The skills are well impacted, for example, Home Economics, Art, P.E, Industrial Arts, computers, computer skills. Actually, all these are actually very, very important and actually can help our children to live independently at some level” (ESO2).

From the findings of the qualitative part of this study, the curriculum change was appreciated by the participants. The ESOs and the CSs were spot on identifying the benefits of the revised curriculum to LSENs. Thus, the qualitative findings demonstrate a good understanding of the CDP by MoGE officials. The officials demonstrated a thorough understanding of the background to the curriculum and further explained its benefits as it relates to SE. However, this understanding seems not to have trickled down to the teachers who are the actual implementers of the curriculum. This is demonstrated by the poor performance among teachers when they were asked to outline the benefits of the revised curriculum to LSENs. It does not help the system to have a well-educated cadre of CSs and ESOs leaving the teachers behind, yet the teachers are the actual implementers of the same curriculum. However, the fact that ESOs understand the curriculum evolution very well, means that they have a critical role to help teachers understand it, but this has to be supported financially.

5.3.5 IEP as a Strategy for Curriculum Implementation

The IEP is a very important strategy for effective implementation of a curriculum to LSENs. According to the MoGE (2013:17), “Learners with Special Education Needs (SEN) are required to have IEPs. These set out how best to overcome the challenges they face and so ensure they make the best possible progress”. The researcher collected information using both questionnaires and teacher observation to establish the use of the IEP to implement the 2013 curriculum. The questionnaire presented the quantitative part and the teacher observation post-lesson discussions provided the qualitative part. The instruments supported each other to provide a picture of the situation on the ground. From the questionnaire, respondents were provided with a list of curriculum adaptation strategies of which the IEP was one. Respondents were asked to state whether they used the IEP as a strategy for implementing the revised curriculum. Table 5.11 shows the results:

Table 5.11

Comparing IEP practice in curriculum implementation with qualifications and schools where respondents were drawn

Characteristic	Category	Yes	%	No	%	Sometimes	%	Not sure	%	Total	Total%
5.11.1. Qualifications (p-value = .002) (r = 508; p = .002.	Certificate in SE	2	50	1	25	1	25	0	0	4	100
	Diploma in SE	34	75.6	2	4.4	8	17.8	1	2.2	45	100
	Degree in SE	12	48	9	36	2	8	2	8	25	100
	Masters in SE	2	20	5	50	2	20	1	10	10	100
	Not Trained in SE	9	25.7	13	37.1	10	28.6	3	8.6	35	100
	TOTAL (<i>Missing value = 1</i>)	59	49.6	30	25.2	23	19.3	7	5.9	119	100
5.11.2. Type of school (p-value = .001)	Special School	36	59	11	18	11	18	3	4.9	61	100
	Inclusive School	8	20.5	17	43.6	10	25.6	4	10.3	39	100
	Special Unit	15	83.3	1	5.6	2	11.1	0	0	18	100
	Hospital Unit	0	0	1	100	0	0	0	0	1	100
	TOTAL (<i>Missing value = 1</i>)	59	49.6	30	25.2	23	19.3	7	5.9	119	100

Source: Survey data

** significant at 0.05 level*

Those that had diploma and degrees in SE were more likely to prepare an IEP for their learners than those that were not trained in SE i.e. ($\chi^2 (12, n = 119) = 30.69, p < .05$). The strength of this relationship is large at ($\phi = .508$), thus indicating that a strong relationship exists. Thus, a relationship exists between specialised qualifications and the ability and desire to practice or implement the IEP. It is however not clear why those with master's degrees were generally not able to prepare an IEP. While there may be other factors that could be behind this relationship, which the Chi-square test cannot provide, what is shown is that qualification is one of the strong factors. However, the results do not tell whether SETs were actually preparing IEPs but this gap has been covered by the qualitative data.

Schools that were specialised were also likely to prepare an IEP than those that were inclusive, i.e. ($\chi^2 (9, N = 118) = 27.99, p < .001$). There is a stronger relationship at ($\phi = .485$) between the type of school and the practice of IEP. Thus, SETs in special schools were more likely to prepare an IEP than those in inclusive schools. There could also be many factors related to this. One of the factors is that most teachers found in special schools were qualified and specialised in the field of SE than those that were found in inclusive schools teaching LSENs.

The results demonstrate minimal use of IEP in implementing the 2013 curriculum. Though 49.6% said they were able to use the IEP, half of the sample said they never used the IEP, or used the IEP sometimes or were not sure at all. The qualitative results show a negative picture of IEP implementation.

From the observation tool that the researcher used to observe teachers, one of the aspects the researcher wanted to hear about from the teachers during post-lesson discussions was the use of the IEP to implement the 2013 curriculum. From the literature review, the IEP is an instrumental tool in the provision of SE. However, none of the respondents the researcher interacted with was able to provide an updated IEP. Teachers and schools, in general, do not use an IEP to address the educational limitations of LSENs. According to MoGE (2016:5), an IEP is a “programme designed to address unique educational needs of an individual learner”. Mangal (2012: 560) defines the IEP as “a written plan drawn for providing SE services to the individual child”. The IEP should be one of the key strategies for implementing the revised curriculum that emphasises practical skills. However, a post-lesson discussion with TR8 revealed that the IEP had been replaced with Individualised Education Activities (IEA). She said:

“Actually this time, it’s like we have done away with the IEP, instead we have IEA (Individualised education activities)... yes, during our training we were taught how to do with that one. Because that thing takes time, it can take even up to a year for someone to do with that one and then you just look at one child for that period, what of the others?”

Other teachers did not just have any samples of the IEP. For instance, TR11 said:

“Mostly no, because looking at the number which we have 2-3, it’s a manageable number unlike whereby yaa but it comes to the side of remedial work mostly we do remedial work to pupils but not necessarily preparing it, maybe after time you see some teachers in these classes trying to polish one or two things”.

TR1 when asked whether she prepares an IEP to address the writing problems the learner with physical disabilities has, said:

“Being an inclusive class with him and other learners, I try to be patient with him but I have come up with an IEP for him. So, we have days dedicated like Tuesday and Thursday, I meet him on Tuesday and Thursday, then I teach him on one on one so I... teach him how to write, yes. We are trying to increase his pace; we are trying to increase his pace which he is grasping very well”.

However, when asked for the IEP, the teacher said she did not have it.

Three of the participants expressed complete ignorance about what an IEP is. For instance, when asked whether they had an IEP, the following were the responses;

“No, what’s that? (Laughs) help me understand!” (TR 12)

“Unfortunately, this is when I was planning to, because the learners are all newcomers. I was just planning to write the IEP..... But I think any day...” (TR 5).

When the researcher wanted to assess whether the participants understood what the letters IEP stand for, TR 6 said;

“Individual what, what, what, Individual what, I have forgotten but I have the idea on what to do, but I have just forgotten the the format and what the initials stand for”.

TR 6 further said”

“IEP that is individual.....is it evaluation... (thinks) I have an idea maybe I have just forgotten, is it individual educational plan?” (Laughs)

The above responses show that SETs were not using the IEP as a tool for implementing the curriculum. It would be misleading to suggest that the IEP has been replaced with the IEA. The IEAs according to MoGE (2016:5) “are educational activities designed to meet the unique educational needs of the learner in the teaching and learning process”. The MoGE recognises both approaches to address the learning needs of children with disabilities but the approaches are different. The IEA is a short-term plan for a teaching approach or strategy used at a given time during lesson delivery while the IEP is a plan that addresses aspects that affect the child’s long-term learning goals. However, it seems SETs think one has replaced the other when actually both are critical in addressing the learning needs of LSENs. The application of an IEP is misunderstood by most teachers although some, especially in inclusive schools, do not know what it is. Most teachers when asked for an IEP could not provide it, giving different excuses. Such misunderstandings have a link with the lack of SET involvement in CDP and lack of training and implementation guidelines. In other countries, as literature reveals, the IEP is a constitutionalised document involving many stakeholders interested in the education of a child with disabilities. For example, Nilsen and Herlofsen (2012), Buli-Holmberg et al. (2014), Pierangelo and Giuliani (2008) and Hebel and Persitz (2014) all emphasise that an IEP is a key tool to the provision of SE. The IDEA 2004 requires that students with disabilities have IEPs developed for them (Obiakor, Bakken and Rotatori 2010). The Norwegian Education Act (n.d) states that education shall be adapted to the abilities and aptitudes of individual pupils and the IEP is widely used (Buli-Holmberg et al. 2014, Norwegian Ministry of Education and Research, Norwegian Ministry of Foreign Affairs, & Norwegian Agency for Development Cooperation 2014). Byers and Rose (2012:10-12) describe the IEP as a programme “focused on enabling a pupil with SEN to make progress in areas of learning that are of direct relevance to the individual”. The MoGE (2016:22-24) implementation guidelines for inclusive education and SE in Zambia have provided several guidelines for implementation of the IEP. The following points have been specifically selected in this regard:

- Teachers or lecturers for LSENs shall prepare an IEP, where possible, in collaboration with parents or guardians of the learner including other professionals.

- Teachers and lecturers teaching LSEN shall include IEA in their daily lesson/lecture plans.
- The educational institution SE committee shall appoint an IEP team to deal with particular cases that arise.
- The educational institution SE committee IEP team shall conduct case conferences to design and implement an IEP.
- The ideal composition of the comprehensive IEP team shall comprise SE teacher, educational psychologist, medical personnel, social worker, education institution administrator, parent or guardian, or any other available therapist.

The guidelines look like a constitution of definitions of concepts used in SE. It does not guide teachers on how to adapt curriculum for LSENs. Zambia develops good documents that help readers to conclude that quality education is being provided. However, teachers seem not to have access to such key documents to be able to do what is required of them. This points to why Zambian teachers are failing to implement the IEP. There have been no documented studies to establish this, though scant literature around the globe shows negative attitudes of teachers and parents toward the implementation of the IEP. Roe (2008) found that there were many challenges in developing and managing IEP because parental involvement was constrained by time-consuming meetings and communication barriers between English-speaking teachers and parents of children with disabilities who were non-English speakers. Gregory (2015) acknowledges the challenges that Roe (2008) observes such as language barriers and time constraints in managing IEP, adding that cultural insensitivity and feelings of inferiority when one is involved in the IEP development process emerge, suggesting that the IEP is a labelling practice that seemed to be at variance with inclusive policy, thereby perpetuating marginalisation or exclusion of LSENs.

It should also be noted that perhaps the need for training and continuous professional development in the implementation of the IEP could be useful. Teachers may not have adequate skills in this regard. Kern (2006), in a survey study of teacher attitudes regarding inclusive education in Philadelphia Urban district found that 15.6% strongly disagreed with the need for more training appropriate to students with disabilities, 22.1% disagreed while 49.4% agreed strongly and 13.0% agreed. These results show that about 60% needed more training in IEP administration. This means teachers felt unsatisfied with the level competence in administering an IEP when teaching LSENs. However, there seemed to be positive

attitudes toward the use of the IEP. In the Zambian situation, an independent study is needed to examine IEP implementation. However, as long as legislation on the implementation of IEP does not exist, it is not easy to compel teachers to implement the IEP. In some countries like the USA, implementation of IEP is mandatory. Teachers who fail to implement the IEP are answerable to the law. For instance, according to (Walsh 2013:9), “the failure to implement the IEP may constitute grounds for the non-renewal of a teacher’s term contract”. In Zambia, the newly introduced Teaching Council of Zambia (TCZ), can do well to help enforce this practice by withdrawing erring teacher’s practicing certificates. Since the IEP is not enshrined in the Zambia’s legislation, teachers tend to use their discretion to use or not to use the IEP. This is a gap that needs to be covered because LSENs definitely need individualised attention to a larger extent though the promotion of inclusive policy promotes learners to learn together.

5.3.7 Other Strategies being used by Teachers to Implement the Curriculum: Quantitative Results

The questionnaire provided a list of adaptation strategies and asked respondents to tick which ones they were using in the implementation of the 2013 curriculum. A Chi-square test of goodness of fit was applied to examine whether there were differences between the qualifications respondents had with strategies they may have adopted for use in the implementation of the revised curriculum. The qualifications denote specialised and unspecialised teachers teaching LSENs. It was assumed that specialised teachers were likely to be more knowledgeable about the strategies necessary for teaching LSENs than none specialised teachers, hence the Chi-square test of goodness of fit used to establish whether such differences existed in the application of the strategies. Table 5.12 is a presentation of their responses with *p*-values indicated for each category. In some cases, some respondents did not complete some parts hence the missing values indicated under each total. However, the missing values did not affect analysis as the numbers were still within the required results for generalisation.

Table 5.12

Other strategies being used by SETs to implement curriculum

Characteristic	Category	Yes		No		Sometimes		Not Sure		Total	
		FQ	%	FQ	%	FQ	%	FQ	%	FQ	%
5.12.1. Use of extra time during exams (p -value = .000)	Certificate in SE	2	50	0	0	2	50	0	0	4	100
	Diploma in SE	36	80	2	4.4	5	11.1	2	4.4	45	100
	Degree in SE	24	96	1	4	0	0	0	0	25	100
	Masters in SE	8	72.7	2	18.2	0	0	1	9.1	11	100
	Not Trained in SE	22	62.9	7	20	0	0	6	17.1	35	100
	TOTAL	92	76.7	12	10	7	5.8	9	7.5	120	100
5.12.2 Extra time during tests (p -value = .114)	Certificate in SE	2	50	1	25	1	25	0	0	4	100
	Diploma in SE	38	84.4	4	8.9	2	4.4	1	2.2	45	100
	Degree in SE	17	68	1	4	7	28	0	0	25	100
	Masters in SE	6	54.5	0	0	4	36.4	1	9.1	11	100
	Not Trained in SE	23	65.7	5	14.3	6	17.1	1	2.9	35	100
	TOTAL	86	71.7	11	9.2	20	16.7	3	2.5	120	100
5.12.3. Giving different assessment tasks (p -value = .086)	Certificate in SE	3	75	0	0	1	25	0	0	4	100
	Diploma in SE	35	77.8	4	8.9	5	11.1	1	2.2	45	100
	Degree in SE	20	83.3	2	8.3	2	8.3	0	0	24	100
	Masters in SE	5	45.5	3	27.3	2	18.2	1	9.1	11	100
	Not Trained in SE	19	54.3	12	34.3	4	11.4	0	0	35	100
	TOTAL (missing value = 1)	82	68.9	21	17.6	14	11.8	2	1.7	119	100
5.12.4. Reducing number of tasks (p -value = .141)	Certificate in SE	2	50	0	0	2	50	0	0	4	100
	Diploma in SE	31	68.9	6	13.3	6	13.3	2	4.4	45	100
	Degree in SE	20	80	1	4	4	16	0	0	25	100
	Masters in SE	4	36.4	4	36.4	2	18.2	1	9.1	11	100
	Not Trained in SE	18	51.4	10	28.6	5	14.3	2	5.7	35	100
	TOTAL	75	62.5	21	17.5	19	15.8	5	4.2	120	100
5.12.5. Replacing tasks (p -value = .606)	Certificate in SE	2	66.7	0	0	1	33.3	0	0	3	100
	Diploma in SE	24	53.3	10	22.2	8	17.8	3	6.7	45	100
	Degree in SE	12	50	3	12.5	8	33.3	1	4.2	24	100
	Masters in SE	4	36.4	4	36.4	2	18.2	1	9.1	11	100
	Not Trained in SE	12	34.3	13	37.1	9	25.7	1	2.9	35	100
	TOTAL (missing value = 2)	54	45.8	30	25.4	28	23.7	6	5.1	118	100
5.12.6. Omitting tasks (p -value = .104)	Certificate in SE	1	25	1	25	0	0	2	50	4	100
	Diploma in SE	18	40.9	18	40.9	4	9.1	4	9.1	44	100
	Degree in SE	8	33.3	7	29.2	6	25	3	12.5	24	100
	Masters in SE	2	18.2	6	54.5	1	9.1	2	18.2	11	100
	Not Trained in SE	7	20	16	45.7	10	28.6	2	5.7	35	100
	TOTAL (missing value = 2)	36	30.5	48	40.7	21	17.8	13	11	118	100
5.12.7. Individualised teaching (p -value = .012)	Certificate in SE	3	75	1	25	0	0	0	0	4	100
	Diploma in SE	33	75	2	4.5	9	20.5	0	0	44	100
	Degree in SE	16	64	3	12	6	24	0	0	25	100
	Masters in SE	4	36.4	3	27.3	3	27.3	1	9.1	11	100
	Not Trained in SE	13	38.2	8	23.5	13	38.2	0	0	34	100
	TOTAL (missing value = 2)	69	58.5	17	14.4	31	26.3	1	0.8	118	100

	<i>value = 2)</i>										
5.12.8. Using recorders (<i>p</i> - <i>value</i> = .565)	Certificate in SE	1	25	3	75	0	0	0	0	4	100
	Diploma in SE	6	13.3	36	80	1	2.2	2	4.4	45	100
	Degree in SESE	2	8	19	76	0	0	4	16	25	100
	Masters in SE	0	0	9	81.8	0	0	2	18.2	11	100
	Not Trained in SE	2	5.9	30	88.2	1	2.9	1	2.9	34	100
	TOTAL (<i>missing</i> <i>value</i> = 1)	11	9.2	97	81.5	2	1.7	9	7.6	119	100
5.12.9. Using computers to teach (<i>p</i> - <i>value</i> = .600)	Certificate in SE	2	50	2	50	0	0	0	0	4	100
	Diploma in SE	10	22.2	23	51.1	9	20	3	6.7	45	100
	Degree in SE	5	20.8	9	37.5	8	33.3	2	8.3	24	100
	Masters in SE	1	9.1	8	72.7	1	9.1	1	9.1	11	100
	Not Trained in SE	6	17.1	22	62.9	6	17.1	1	2.9	35	100
	TOTAL (<i>missing</i> <i>value</i> = 1)	24	20.2	64	53.8	24	20.2	7	5.9	119	100

Source: Survey data

FQ = Frequency

* significant at .05 alpha level

Table 5.12 had a number of variables related to strategies used in implementing the revised curriculum tested against qualifications to see whether there were significant differences between each one of them. Qualifications were the correct variable for comparison because strategies for curriculum implementation of general classroom practice require that teachers are qualified to use such strategies. Since the study discovered that there were some teachers that were not specialised in SE, it was necessary to compare differences in the results. Most of the variables did not show significant differences when compared with qualifications. However, some showed significant differences with strong associations.

From the results, the use of extra time during exams (see 5.12.1) scored positive significant differences at (χ^2 (12, n = 120) = 36.25, p < .05). This showed a strong association between qualifications and their being able to give extra time to LSENs during examinations. The (ϕ = .550) equally showed how strong that relationship was. These differences are in line with frequency and percentage calculations which showed that in general most teachers (n = 120; 76.7%) of the total respondents saying 'yes' to giving extra time during examination.

However, a contrasting result was obtained on extra time for tests at (χ^2 (12, n = 120) = 17.15, p > .05), indicating that there were no significant differences in the responses. However, the differences are at the medium level at (ϕ = .378).

On question 5.12.3, 'giving different assessment tasks', the Chi-square test results were at (χ^2 (12, n = 119) = 19.11, p > .05). There were no significant differences according to qualifications. When SETs were asked about reducing the number of tasks (question 5.12.4), Chi square calculation was at (χ^2 (12, n = 120) = 17.22, p > .05), replacing tasks at (χ^2 (12, n =

118) = 10.12, $p > .05$), and omitting tasks at (χ^2 (12, $n = 118$) = 18.37, $p > .05$). The overall percentage scores for ‘yes’, ‘no’, sometimes and ‘not sure’ for each of the four strategies are evenly spread except for the strategy involving giving different tasks. The reason for the spread of such responses does not necessarily relate to qualifications but shows a lack of teacher autonomy and lack of guidelines on how to implement the strategies. For instance, if the tasks are replaced or omitted, reduced or learners are given different tasks to practise on, the teaching for examination syndrome predisposes LSENs to failure because the examination, which is centrally set, does not reduce, omit or replace examination tasks according to the abilities of LSENs. LSENs in Zambia write the same examinations with all other learners without disabilities though modifications are allowed in terms of time. In this regard, the MoGE (2016:25) has a progressive policy which says “examinations shall be based on modified or alternative curriculum for LSEN and that ECZ and school-based examinations for the HI shall be set in sign language”. This needs to be extended to various other disabilities. For instance, Muzata (2015) recommends inclusive assessment procedures for LSENs so that such learners can have not only more time to take an examination but to take the examinations as many times as they need and when they are ready. According to Muzata (2015:85):

the use of modern facilities such as computers and its related software, accompanied with localised assessment procedures involving someone writing for the learner while the learner gives answers, recording answers in audio cassettes, examiner to learner face to face oral assessment and computer/video facilitated examinations would help fairly assess such learners according to their disability.

The ECZ has made considerable efforts to include guidelines on how to manage examinations for LSENs. ECZ (2015:20) says “the head teacher/principal shall propose names of support personnel to be appointed by the DEBs as transcribers, tape recording assistants, readers, amanuensis and sign language interpreters”. Further, in unpublished leaflets, the researcher found that the ECZ allows 25% extra time to candidates with SENs. These are positive efforts that need support and inclusion in the education laws and professional practices as well as in instructional guidelines. However, even though the council has made such commendable efforts, the document does not say whether examinations may be modified in any way for LSENs who cannot manage certain topics due to their disability, as this study has revealed from observed SETs’ perspectives. Such initiatives can be done, for instance, by including in the examination paper optional questions

only for learners with certain special needs. The ECZ leaflet does not further explain how examinations for LSENs can be handled and managed from setting to marking and processing of examinations results. Because of such restrictions, teachers have no autonomy to omit, substitute or reduce content based on a learner's disability. CDC has a duty to ensure instructional guidelines that include substitution, omission and reduction of content, manner of assessment and other necessary disability-friendly guidelines are developed in consultation with the examination board. If such proactive initiatives were used by teachers during the implementation of the curriculum in actual teaching and learning and during continuous assessment of LSENs, fair and reasonable assessment would be ensured.

For adaptation to be practicable, SETs need to know what can be omitted, substituted or reduced from the content for LSENs and examinations should include such measures to accord LSENs a fair assessment. Such measures are highly practicable when teachers are given the opportunity to manage their examinations for LSENs from the same curriculum. However, in a centralised arrangement where the council manages the examinations, measures should be taken into consideration to provide assessment that accommodates LSENs. In an inclusive assessment arena, flexibility, fairness and equity need to prevail. This will help Zambia increase the chances of attaining the sustainable development goal number 4 on quality education. All such suggestions can only work when policy is translated into law and SETs are educated and empowered to employ such strategies.

On the use of individualised teaching, there were significant differences recorded from the results at (χ^2 (12, $n = 118$) = 25.53, $p < .05$). Respondents with qualifications in SE were more likely to use individualised teaching than those who did not have these qualifications. The strength of this relationship is at ($\phi = .465$), close to a large association. But the results resonate with the qualitative findings that there is little emphasis paid to the utilisation of the IEP as a strategy in implementing the curriculum for LSENs. Therefore, individualised teaching requires enforcement by ESOs, otherwise, it will not benefit LSENs.

On the use of recorders as a strategy, (question 5.12.8), there were no significant differences in the responses given by respondents at (χ^2 (12, $n = 119$) = 10.56, $p > .05$). However, an overall percentage of 81.5% indicated that SETs did not use the facility to teach LSENs. Thus, the type of qualification appears to be irrelevant. There may have been several factors that could influence that result, for instance, lack of knowledge that such tools can be used and the non-availability of the tools for education purposes. Muzata (2013a), in a study of distance

education students at Nkrumah and Mufulira Colleges of Education, established that audio-recorded CDs, for instance, helped not only students without disabilities but also VI students that were taking a teaching course at the time.

The use of computers (question 5.12.9) to teach showed no significant differences among respondents giving a (χ^2 (12, $n = 119$) = 10.18, $p > .05$). In general, 54% of SETs did not use computers for teaching. The use of computers facilitates teaching and learning especially of LSENs because computers act as compensation for certain lost functions. In the 2013 curriculum, the MoGE introduced creative and technology studies at lower primary level and as computer studies at junior secondary level (MoGE 2013). The Ministry's 2010 implementation strategy recognised the provision of enhanced access to ICT for LSENs (MoE 2010). However, data from the field shows that despite these efforts to make the teaching of computer studies a policy, LSENs have not started feeling the benefits of the 2013 curriculum in this regard. In this study, it was established that most schools for LSENs do not have computers and some of those that had did not have computer laboratories or rooms and worse even, some schools did not have electricity to be able to make use of computers. Beyond this, some teachers even lamented not having skills to teach computer studies and even to use computers for teaching purposes. The issue in the Zambian situation is that the new curriculum introduced computer studies as a subject from grades 8 -12, and technology studies for lower grades. The argument being forwarded is that computer studies and technology studies as subjects are also taken by LSENs. However, the study established that computers were inadequate, in some cases even if they were available, they had no specialised software, such as JAWS, for use especially by VI learners. Teachers also were not trained to teach computer studies as a subject to these LSENs. These results resonate with Mulenga (2016), and Mambwe (2016) studies in which they established that the implementation of computer curriculum in Ndola and Mwansabombwe respectively was marred with lack of trained teachers in computers as well as inadequate computers and accessories. Mambwe (2016) in a study of selected schools in Mwansabombwe in Luapula province found that only 10% of the sampled schools had implemented the computer studies curriculum effectively. In 2015, the administration of grade 9 examinations was faced with challenges of inadequacy of computers and power blackout compelling the then Minister of General Education to apologise to the nation. In his apology, the Minister said,

It was not the Ministry's intention to have some learners write these examinations late in the night but due to circumstances and challenges beyond our control such as inadequate

computers in some schools while others experienced power cut whilst conducting the examinations MoGE (2015)

This evidence from such studies shows that the 2013 curriculum was ill implemented. Teachers, not only in SE but also computer studies were not trained but a curriculum was already launched for implementation in 2014. Computers are a critical assistive technology for effective teaching and learning of learners with VI and other disabilities. The inadequacy of computers and the lack of trained teachers definitely affects the implementation of the curriculum to LSENs.

Teachers need training to be able to implement the curriculum effectively. Some studies have established that teachers usually feel unconfident about teaching new content unless they have been trained to do so Thompson et al (2013). In countries where teachers have been prepared to implement a curriculum, confidence levels are high. For instance, Rout (2013) reported that training on ICT programmes resulted in teachers' high levels of performance in basic and advanced ICT skills from opening and shutting down of a computer to word processing, PowerPoint and Microsoft Excel. These advanced ICT skills are necessary for teachers especially in the teaching of LSENs because teachers would be able to vary teaching approaches by designing appropriate lessons for the differently-abled learners.

Qualitative findings provided by teachers that were observed in teaching and the post lesson discussions that were conducted reveal that teachers adopted different strategies to implement the curriculum.

5.3.7.1 Task differentiation

Teachers reported that they differentiated tasks according to learners' abilities. One of the specialised teachers (TR2) said:

“Yes, I introduce a topic but when giving them the tasks to do that’s when I differentiate. There are others when you write on the board they will be able to write on their own, but for some you have to write their work in their exercise book. Others you can give them 5 tasks, but others you reduce may be 2, others even 1 task yes“.

5.3.7.2 Improvisation

Teachers used their own initiatives to make teaching and learning materials for learners but with challenges.

“Yes, we make books, yes, like for example, like last year I was teaching grade 1 and grade 2, I had to make sure that those tu ma story books that are used for 1 and 2, I made sure I put them into braille so that the learners are able to read and off course, when you finish using those things whoever will come again, they get those things and add on but it’s a hard thing because we don’t have when we were growing up sir, when we went to school that time, the braille print, where being printed in Lusaka and we used to have a lot of books in schools unfortunately this time, there are no books that are being made. They do bring machines in schools which they pay maybe the embossers but you know it’s difficult we are all teachers here, so we can’t maybe teachers/ eeee and sometimes these embossers can’t work out, they are just gathered sometimes in schools they are not working. The software that is able to make them work is are not available, all these things are challenges, yes” (TR9).

One of the experienced deaf teachers (TR7) showed how he improvised to be able to teach learners with HI using the content in the revised curriculum. Figure 5.5 is one of the aids he devised.



Figure 5.5: Improvised teaching and learning tool

Source: Field capture

Figure 5.5 is an illustration of human body parts connected to a locally made electrical appliance with a torch. The learner is required to tap at the required body organ and if the answer is correct, the torch lights up.

This is peculiar to this teacher. It demonstrates that teachers have the capacity to develop material if empowered and supported with knowledge, skills and resources. However, this skill was not seen among other teachers that the researcher observed. If curriculum implementation is left to individual teachers to do it their own way, the quality of education provision especially for LSENs would be unequal. However, if guidelines separate or enshrined in different syllabi are provided, teachers would implement the curriculum evenly to all learners.

5.3.7.3 Team teaching

Another strategy used by some teachers to overcome the challenges coming with the 2013 curriculum was team teaching. During observation, the researcher observed team teaching used as a strategy for implementing the revised curriculum. Two VI teachers used team teaching and were asked why they resorted to such a method. TR9 said:

“In the first place, personally I am not very fluent at Tonga. secondly, the children that we are mentoring in English, Tonga is the official is the official language here, though we are told to say, whenever you use English, you use local language that they speak, for you to like help for them to get what you are trying to talk about, yes sir, may be that’s how come you notices that, and am sure you noticed to say each time I said something in English, my brother was there to interpret it in Tonga yes”.

From the above verbatim, language of instruction is a challenge of curriculum implementation. Teachers work out strategies to overcome this. Even then, local languages were still short off adequate vocabulary to explain the different concepts in computer lessons.

5.3.7.4 Applying both the old and the revised curriculum

According to TR10, the old textbook in Mathematics is better than the new one. The participant was referring to textbooks for ordinary learners that were distributed.

“Some topics have been removed from this one. Like circumference, circumference is a new topic which they have added there, but some of the topics they are just the same. That’s the curriculum which am using. But now what I am doing when am teaching I am trying to compare, this old curriculum and the new curriculum. I am applying both now to teach these learners. This material which I have now, I cannot cheat, and this is the new curriculum I cannot cheat, that is why I have told the

lecturer. Now for sign language it's not there. It's now me the teacher to use sign language as a teacher, sign language is not there, me myself I use sign language".

TR 10 noted that the textbook for Mathematics being used to teach the HI had no sign language. The participant was forced to find signs to use. But how uniform would such signs be with other teachers teaching the HI elsewhere?

5.3.7.5 Consultation with other teachers

One other strategy captured from the researcher's interaction with teacher participants is consultation with other teachers:

"I try some of the things. Like circumference it's a new word, I have to consult from other teachers but if I fail I use finger spelling, 'spell circumference' but they do not understand then I leave it like that what can I do? because you will never find the word which is signed circumference, we will never" (TR10).

The strategy of consultation can be effective if curriculum groups are formed at school, zone, district or provincial levels to enable teachers to have periodic meetings to discuss challenges faced while implementing the curriculum. In the absence of such modalities, consultation would be limited, meaning within a district or province, there might be many signs for a single word in sign language.

5.4 CHALLENGES FACED BY TEACHERS IN THE IMPLEMENTATION OF THE 2013 CURRICULUM

The previous section provided results and findings on how SETs were implementing the revised curriculum and the strategies they were using to implement the revised curriculum. One other research question for this study was to establish the challenges SETs were facing when implementing the revised curriculum. From the qualitative data perspective, the researcher asked the CSs, ESOs and SETs to explain the challenges faced in implementing the revised curriculum. This question was critical to this study because establishing the challenges would help suggest strategies to overcome them and improve curriculum implementation for LSENs. Most of the data on the challenges from questionnaires, ESOs' and CSs interviews and teacher observation post-lesson discussions was analysed in NVIVO with the different groups coded as cases and compared in their responses.

5.4.1 Challenges Related to Materials

The problem of lack or inadequate materials is perhaps the most obvious challenge impeding effective curriculum implementation in most African countries. The MESVTEE (2013c) National Assessment Survey Report revealed challenges of inadequate teaching and learning resources in various subject areas such as English, Mathematics and Zambian languages among other challenges such as poor infrastructure and lack of computers. Such challenges have not spared the SE and have even ended up affecting the implementation of the revised curriculum.

5.4.2 Challenges of Specialised materials

Specialised materials are of prime importance to the effective teaching and learning of LSENs. Table 5.13 shows the analysis of the responses to the question on availability of specialised materials necessary for the implementation of the curriculum. The results were compared among the three provinces where respondents were drawn to ascertain any possible differences in terms of having materials for implementation of curriculum to LSENs. Thus, Chi-square test of goodness of fit was run to obtain *p*-values that informed the researcher whether there were any differences or not.

Table 5.13

Availability of specialised materials in inclusive and special schools: SETs' views

Nature of specialised material	Yes	%	No	%	Total	Total %
Braille (p-value = .010)	25	20.8	95	79.2	120	100
Stylus (p-value = .154)	31	25.8	89	74.2	120	100
Braille Slates (p-value = .312)	28	23.3	92	76.7	120	100
Hearing Aids (p-value = .822)	26	21.7	94	78.3	120	100
Visual Aids (p-value = .202)	30	25.0	90	75.0	120	100
Magnifiers (p-value = .116) (missing = 1)	15	12.5	104	86.7	119	100
Sight correction glasses (p-value = .003) (missing value = 2)	8	6.8	110	93.2	118	100
Computer with special keyboard (p-value = .026)	15	12.5	105	87.5	120	100
Computer with talking software (p-value = .000) (missing value = 1)	22	18.5	97	81.5	119	100
Recorders (p-value = .695) (missing value = 1)	13	10.9	106	89.1	119	100
Special seats for physically disabled (p-value = .000) (missing value = 2)	19	16.1	99	83.9	118	100
Posture Holders (p-value = .002)	13	10.8	107	89.2	120	100

Source: survey data. *p*- values arrived from a comparison of 3 provinces

Though there were a few significant differences in the responses between provinces on the availability of specialised materials for the implementation of the revised curriculum, the general picture from the totals of responses on each specialised material listed was negative. Thus, most respondents from the three provinces indicated that there were no specialised materials for the implementation of the revised curriculum. The Chi-square test on braille material was significant at ($\chi^2 (2, N = 120) = 9.19, p = .010, <.05$) indicating an association between the availability of braille materials and provinces. Provinces like Lusaka and Southern at least had some braille materials while North Western largely did not have. For instance, (n = 28, 48%) SETS in Lusaka indicated they had braille materials while (n = 28, 29.5%) said they did not have. In Southern province, (n = 11, 44%) SETs indicated having the braille materials while 29 (30.5%) indicated not having but North Western only had (n = 2, 8%) SETs indicating they had braille materials while (n=38, 40%) said they did not have. The association is however below medium at ($\phi = .277$) showing that it was not very strong.

Other significant differences were noted on specialised materials such as sight correction glasses at ($\chi^2 (2, n = 118) = 11.704, p = .003 <.05$) with North Western Province not having any. On whether schools had computers with special key board, results showed association at ($\chi^2 (2, n = 120) = 7.314, p = .026 <.05$) with North Western having one respondent agreeing to having the equipment. Generally, the relationship strength is below medium at ($\phi = .247$).

The other significant association was established on the availability of computer talking software in the different provinces. The results were significant at ($\chi^2 (2, n = 119) = 15.442, p = .000 <.05$) with a relationship strength of ($\phi = .360$), which is slightly above medium. Significant differences were also recorded on specialised seats and posture holders for physically challenged learners at ($\chi^2 (2, n = 118) = 26.874, p = .000 <.05$) with a relationship strength at ($\phi = .477$ large) and ($\chi^2 (2, n = 120) = 12.595, p = .002 <.05$) with a relationship strength of ($\phi = .324$) respectively.

There could be different reasons for the significant differences observed. One of the factors is the nature of the school. Thus, some specialised materials may not be available in certain schools because they do not have learners with certain types of impairments. However, the general weaknesses in the established associations may also show that specialised materials were simply not available without any assumptions that some provinces may have been provided and not others. The results, however, do not represent the materials found in the

schools but the views of teachers on whether the materials were available for use in implementing the curriculum.

The study established both qualitatively and quantitatively that teachers were not using recorders, had limited use of computers and no access to computer-assisted software. The lack of brailers, braille slates, styluses, hearing aids, visual aids, sight correction glasses, special computer key boards and other assistive technologies deny LSENs access to the curriculum. Recorders for instance are known to be very useful devices for production of learning modules for especially the VI learners. If used alongside computers, compensatory learning for learners with VI would be ensured. Muzata (2013a) established that the use of audio recorded lessons not only benefitted VI students but also students without disabilities. There is need for investment in such technologies that will enable learners with disabilities have access to the curriculum. One of the teachers of VI learners, when asked whether they had recorders replied:

“No, we don’t have... recorders andthose they are very important because even when we go at higher learning institutions, when you are recording lessons and you listen at your own time it’s much better and even our learners” (TR9).

The introduction of computers as a subject in schools has been welcomed by most stakeholders and especially teachers teaching LSENs. ESOs lauded the revised curriculum despite its faulty implementation. According to the qualitative data collected, the researcher established that some schools had computers while others did not have. There were schools that had computers but no computer rooms for learners to have access.

“We have a computer lab yes eee, there is but we don’t have a SE resource room” (TR6).

The teacher referred the researcher to the computers that were stored in a staff room and said:

“These are for learners. It’s just unfortunate that we don’t have a room where we can put that we are building that side I think in future if it will be completed I think we can have a room for that”.

Computers need to be specialised if they are to be accessed by LSENs. For instance, the VI cannot use computers without JAWS software or other speaking software. The literature reviewed for this study cites Arnold (2009) saying computer programs or applications exist to

aid every level of education, from programs that teach simple addition or sentence construction to programs that teach advanced calculus. It further cites Anthony (2013) explaining the use of a program called JAWS that helps a blind person to read, write and interact with the computer. Some of the participants (CS1, CS2, ESO5, ESO 6) noted that computers that were sent to schools lacked the necessary software for learners with VIs to have access. Some VI teachers also noted this as a challenge saying the school only managed to purchase JAWS from South Africa for a few computers and not all due to high cost of the software. The lack of computers and the necessary accessories that allow access by persons with disabilities inhibit the quality of education provision and denies the learners with disabilities the right to education and the curriculum as a whole.

5.4.3 Lack of Adapted Teaching and Learning Materials

The study further established that SETs in most cases were teaching without books for the 2013 curriculum.

“Yes, ee if am not mistaken it should be 2016, No in 2016, that’s when all the examinations were in the revised curriculum. The children with disabilities or children with SEN didn’t have, most of the schools didn’t have the course books to go with” (TR11).

“And they wrote that exam meaning their performance was purely, it was just gambling. So, in my view, prior even to the actual developing of the curriculum and the actual implementation when it was launched the books could have been looked into, adapted books tailored to the alternative curriculum for visually impaired and the HI mostly because these with physical disability they can still benefit in the main revised curriculum, but these two disability groups, the VI and the HI, those have challenges” (ESO2).

Even CSs attested to this fact that LSENs wrote the same examinations yet they had not started implementing the revised curriculum.

Participants reported different challenges related to lack of materials during post lesson discussion. Below are selected extracts:

“... Challenge....uhuuu... and materials, we also lack materials. eee because I was trained to teach languages. I was supposed to be teaching English and Religious

Education, that is what I was trained under diploma. But although I am pursuing a degree programme with Nkrumah where now I am doing ...” (TR6).

“... actually that is a challenge as for this year, I personally for level one I don’t have a syllabus, so the one that I am using is for level two” (TR8).

“We only have the syllabus. They are still developing the learner’s books”. (TR 2)

“... books in sign language are not there me am just using my own experience to teach them. Otherwise from the books, sign language is not there. Even these I had to draw them myself” (TR7).

“Yes. We don’t have the teacher’s guide and the learner’s book. But from the content in the syllabus we are able to make a lesson you can even make a....we are able to plan” (TR2)

These findings reveal that syllabuses adapted from the general curriculum were not ready at the time of this study. And in any case, the type of adaptation referred to here is the translation from ordinary language to either braille or sign language. The lack of adapted materials was also reported by ESOs and CSs.

Teachers in schools did not have the syllabuses. One of the teachers even describes the curriculum for special needs as confusing. TR2 said:

“The curriculum that we use in the special needs is still confusing because it’s in levels. It’s in level 1, level 2, level 3, so when we get, we plan for... get the content for level one we take it as grade 1 and 2, but in the syllabus its written as level one, then there is another content for level which we take as grade 3 and 4, then level 3 we take it as grade 5 to grade 7”.

Such sentiments demonstrate frustrations and dissatisfactions on the part of teachers who are the implementers of the curriculum. One ESO described the implementation of the curriculum to LSENs as a disaster.

“That’s why am saying my brother it is difficult to see the change because we have not even started implementing, how do we see a change on something that we have not even started? I am telling you in SE, it is a disaster” (ESO7).

To the ESO, implementation in special education has not even started and the benefits of the revised curriculum could not even be talked about.

ESO3 referring to the revised curriculum said:

“Yes but it is doing very well for these learners without hearing impairment or without disabilities. Literally meaning, it seems it was meant for those learners not necessarily SE may be those for SEN it came as an afterthought”.

CS2 expressed displeasure why SE is always left behind when major changes take place:

“You know every time special education, they are always left behind, thus where the challenge is, we don’t start things at the same time. I will give an example, like when they started developing books, we were not given money to start rolling our programme, we were left out. They wanted first the so-called normal to start developing the book where as we were told there is no money, we were told we will start later on, thus where the challenge is, we don’t start things at the same time. The so-called normal will go ahead, us we are always behind, thus where the challenge is. If only we can roll the programme at the same time, it will be better, because when we started developing the syllabus we developed at the same time but when coming to developing books, we were left behind. Even when orienting teachers, we just did it generally, we were told you will do it later, up to today”.

These and many other sentiments expressed by SETs, ESOs, and CSs, have kept the continued stigma of discrimination alive over several years of successive policies that have – on paper –demonstrated progress in SE. A process such as curriculum development should not leave out key stakeholders. Leaving out key stakeholders in CDP frustrates curriculum implementation and quality service provision for LSENs. The lack of involvement and subsequent lack of providing necessary materials for curriculum implementation is an attack on the profession and not only on individuals. The sooner we realise that we need to address the old tendencies of isolating SE, the better it is for the system to improve its practices.

5.4.3.1 The impact of the lack of adapted materials on VI teachers

The researcher observed two VI teachers who used team-teaching for the observed lesson. During a post-lesson discussion, the teachers described the challenge of lack of course book materials in braille. TR9 described the situation as follows:

“Right now, it becomes an issue because eee it calls for total sacrifice, for me to write a lesson plan, I first have to extract the information from the book. I need to get somebody to read for me, yes. Somebody who is able to read, would read for me, and then I write, using a stylus or Perkins Braille and at the end of it now after that person is gone, that’s when I sit and begin to plan, meaning that the work that we are doing is very tiresome as compared to the other people. Because our friends, they can even come with a book, which is already there, they can even plan late, now for us its difficult, we need to make sure every time you are writing, there is nothing like am tired I cannot manage to plan, I can just pick a book and go, no. Every time we sleep very late, now for us its difficult, we need to make sure every time you are writing, there is nothing like today am tired I cannot manage to plan, I can just pick a book and go, no. Every time we sleep very late. And on top of that even if we say there are no braille book for the teacher, then in means even for our pupils there is nothing, so in order for our pupils to be able to read, we are not only teachers, we are also transcribers, we transcribe books for children to be able to read even the pupils book we have to make sure you transcribe that pupil’s book for our children”.

TR9 further explained:

“Yes, we make books, yes, like for example, like last year I was teaching grade 1 and grade 2, I had to make sure that those tu ma story books that are used for 1 and 2, I made sure I put them into braille so that the learners are able to read and off course, when you finish using those things whoever will come again, they get those things and add on but it’s a hard thing because we don’t have when we were growing up sir, when we went to school that time, the braille print, where being printed in Lusaka and we used to have a lot of books in schools unfortunately this time, there are no books that are being made. They do bring machines in schools which they pay maybe the embossers but you know it’s difficult we are all teachers here, so we can’t maybe teachers/ eeee and sometimes these embossers can’t work out, they are just gathered sometimes in schools they are not working. The software that is able to make them work is are not available, all these things are challenges, yes”.

The lack of adapted materials for implementing the 2013 curriculum has brought extra costs especially to VI teachers. The VI teachers spend their own money trying to adapt the 2013 curriculum.

“And sometimes we have to even pay those people money. Because imagine that everyone here is a teacher, I can’t approach a teacher here to read for me. May be they are busy, so I have to do it at home and my children I can’t be forcing them, to read for me, they have got their own school work as well, I can’t impose, so I have to look for somebody who’s going to be reading for me, who is going to be given something at the end of the month” (TR9).

It is encouraged that teachers need to improvise to meet urgent needs of their learners. However, the lack of adapted books affects many teachers in terms of workload and costs. Improvisation does not mean that that key documents such as text books or syllabuses should be improvised by the teacher. Teachers are already faced with different challenges which include poor conditions of service and to dip into their pockets and print, photocopy or translate a book into braille or sign language at individual cost is stressful. Ndhlovu et al. (2015), in a study to establish the role of counselling in addressing stress in Zambian teachers, found that many teachers were stressed with a variety of responsibilities which eventually affected their work performance.

5.4.4 Lack of Skills among Teachers in Inclusive Schools

The researcher established that teachers teaching learners with mild special needs in inclusive schools did not have adequate knowledge and skills to handle such learners. The teachers were not trained in SE and had the basic knowledge of SE. For instance, after an observation of a teacher who had a learner with social challenges in her class, the researcher, during post lesson discussion asked the teacher to describe how best she thought she had helped the learner. The following was the response from TR5:

“Yes, I think one way of helping that learner, the moment I had put them in groups, I thought I had awarded him an opportunity to socialise with the friends, if possible even to socialise with me as their teacher because I was going round asking them individually those I found they were not contributing, I was asking them you what have you heard, what have you contributed at least I was unable to hear their voices, to the friends in the group, he managed though he failed to come in front to represent after he was picked by the colleagues”.

Thus, the teacher feels putting the learner in a group is enough. There are several other strategies the teacher is required to employ to help the learner participate in group activities.

When the teacher was asked what else she could do to help the learner with social problems, she said:

“What I think I can do is to have a one on one talk with him after learning hours so that I can encourage him to say the little that he knows, he can bring it out then he can be helped where need arises”.

With guidelines, a teacher such as this one can help LSENs in an inclusive classroom because the teacher has ideas. For instance, if introduced to the variety of learning software on computers, the teacher could help the learner to open up and interact with friends. With knowledge of IEP, the teacher in liaison with IEP team members could overcome the social difficulties the learner faces.

Another example of a teacher who did not demonstrate expected skills of teaching LSENs observed in classroom teaching was a student teacher on teaching practice from a private college. When the researcher wanted to know what the teacher would do to help the learners with a hunchback, the hyperactive learner and another with intellectual disability in his class, TR3 said:

“If they are learning, they are in class, because they normally they have difficulty to understand, so I just leave them doing what they are doing... yes, because if am to tell him or her to say you, stop that, then she may feel intimidated”.

First the researcher observes that the teacher was inappropriately placed for his practice teaching because the teacher was training for early childhood education but placed to practice in a primary school. He taught a grade three class but failed to identify LSENs within his class. Ordinarily, a trainee teacher needs to be accompanied while practicing by an experienced teacher in order to benefit.

The most common strategies reported by the teachers that taught learners with VI was placing them in front and giving them hand-outs. When one of the teachers was asked to explain other strategies used to help learners with VI, the teacher explained:

“What I do, I bring him in front so that he sits closer so that at least he is able to see from the board” (TR4).

“Even her sir, her performance is 100% the only challenge we have with that child is she cannot really see on the board despite putting her in front of the board. So, what

we have done, like in my case, we have provided with them pamphlets. So, what she does is, teaching you explain its ok but when it comes to writing, we have to provide her with her own personal notes because to read she has to like get closer to the paper she doesn't use braille, she is able see but a very close" (TR12).

When the researcher asked what other ways the teacher uses to help learners with VI who can only read when a paper is put closer to her eyes, TR12 explained:

"yes we do, like in terms of when it comes to bible passages because they have to memorise them so what we do in terms of the same girl, because they come with their own bibles, the school provides bibles, so when it comes to bible passages because at the pace the friends are catching up its not with her, so we call her because it takes time for her to read through, so we call her at the end of the day or she will come after class, then we sit her down, then she will start going through the same bible passages one by one, then you start explaining because I teach them RE and RE for a girl or a child to obtain good marks, higher marks they are dependable on a bible passage because it carries about 10 marks. So, I will sit with her she will go through the bible, ask her one or two questions, when she is satisfied, she will tell you and every after lesson she will follow you. This is how we try to help her".

The teacher showed limited knowledge of the visual difficulties learners with albinism have. Teachers in inclusive schools seem not to understand the range of visual inefficiencies like short-sightedness, long-sightedness, blurred vision, colour difficulties and other vision-related problems learners could have. As a result, they fail find effective ways of helping different learners differently. For instance, in discussions, none of the teachers reported using large print, enlarging letters when writing on the board, using brighter colours when writing, moderating the pace of the lesson to meet the learner's needs or pairing. If included in the guidelines that accompany a syllabus, these techniques would help teachers, especially those not trained in SE, to provide the necessary adaptations for LSENs. The lack of skills among teachers teaching LSENs in inclusive schools was echoed by TR6 who said:

"I think most of the teachers you will be finding in these schools have not trained in SE, then there is need to have some workshops or other programmes that will help us teachers to know how to go about the teaching of such learners and above all to help schools to have materials for the same".

The teacher further explained that without SE skills, teaching LSENs in larger inclusive classes becomes very difficult:

“I think the challenge generally just a challenge we may talk of lack of experience because in case of this inclusive as it has come on board and suppose we have more serious issues than her where you have completely someone with hearing problems, maybe someone with visual problems so as a teacher who has no experience, it’s not possible, eee you cannot really manage because if you talk of someone with visual, you need to have an idea of braille eeee if you are to teach such a person, if you talk of those who have maybe hearing whatever, you need to have the skill of signing. So without those things completely those people will not benefit anything from the normal stream, eee because it will be like you side-line them, like normally due to this over enrolment, because am talking of 60 something pupils, so in such a class if you have say 2 with such cases and even just like as normal as they call them, we have slow learners, so you find that because of the nature of the classrooms, they are big, you will not waste much time dealing with the slow learners because you want to catch up. With this what has come on board examination analysis, everyone is trying hard to make the pupils pass, those who are capable so that they should pass. So if you concentrate so much on the slow learners you will lose it out (she laughs) so it’s better you concentrate on the fast learners and middle learners whom you at least will cross”.

In the above extract, the teacher raises serious concerns affecting curriculum implementation in inclusive schools. The teacher raises points related to lack of skills among teachers teaching LSENs suggesting that teachers need to be trained. The teacher was also honest in stating that having LSENs in an overcrowded, inclusive classroom wastes a lot of time and a teacher would not waste time on one disabled learner because they (teachers) have been given targets by MoGE demanding higher pass rates. This compels teachers to teach for performance and concentration is focused on learners who can learn faster than the few disabled included in the classrooms. This means inclusive education in practice is not a reality, especially if policies favour only the mainstream class learners. It would be wiser to create a policy that equally motivates a teacher who improves the performance of LSENs in inclusive classrooms.

Many other challenges have been reported in this study. Some of the challenges relate to

specific disabilities. For instance, at one secondary school where learners with physical disabilities are taught by teachers not trained in SE, TR1 said many teachers were not patient with learners with physical disabilities in their classrooms. She said:

“They are not patient, they are not patient with him and not having that background of trying to understand that learner, they don’t pay much attention to him and his needs are not met so after I recognise that I had a talk with the deputy. Yes. So we sat down with the teachers the subject teachers to those classes, to say can you be patient with these learners and if ... where learners that I don’t teach and we have identified they can’t write, its problem to do with writing or coping down is very slow, they have joined my learners who I teach together”.

The lack of training of teachers to teach LSENs compromises quality education delivery. Mahlo (2011) notes in South Africa that many teachers did not have training to teach learners that experienced barriers to learning. The scenario was also established in this study on Zambian inclusive schools. The lack of training for teachers denies LSENs the opportunity to learn effectively. Figure 5.6 gives a summary of specialised and non-specialised teachers observed in teaching.

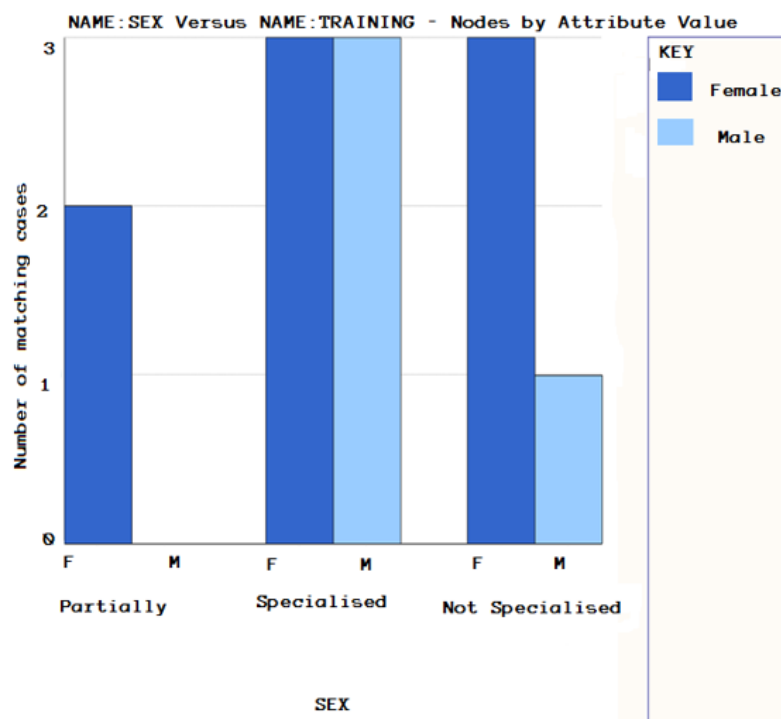


Figure 5.6. NVIVO cross-tabulated data of sex and specialisation of teachers observed in teaching

Figure 5.6 reveals that schools still have teachers that are not specialised in SE. Most unspecialised teachers were found in inclusive schools. Teachers that are not specialised may have limited knowledge and skills of teaching LSENs. It seems specialised teachers are posted to special schools and not inclusive schools, contrary to the inclusive schooling policy. As the situation stands, LSENs in Zambia are found in both special and inclusive schools, hence the need to have specialised teachers in both settings.

A summary of findings from teacher observations revealed that teachers, especially in inclusive schools, lacked skills and knowledge of teaching LSENs. Seven teachers were observed in teaching and five shared their experiences of teaching LSENs with the researcher. The researcher asked questions about what goes on in the classroom and was able to assess and make judgements about the participants' understanding of the 2013 curriculum for LSENs. Table 5.14 shows a summary of skills exhibited by teachers in classroom observation as well through post lesson discussions:

Table 5.14

Skills exhibited by observed SETs (TR is code for teacher)

TR	DESCRIPTION	CLASS DESCRIPTION	POSITIVE COMMENTS	TEACHING SKILLS
TR1	Degree holder who studied SE up 3rd year and changed field. Teaching a learner with physical disabilities within a mainstream classroom	Not observed but offered a discussion	Has thorough knowledge SE needs, explains the needs of the child to researcher	No IEP, though she claims he has. No guidelines
TR2	Bachelor's Degree in SE	Mixed disabilities IC and HI	Possess skills of handling learners with SEN/sign language	Lags behind signing for the HI learners when explaining. no IEP
TR3	Trainee teacher on teaching practice	Class with 43 learners and 4 LSENs; PC (1), ADHD (1), & IC (2)	X	No specialised skills/doesn't know LSENs in his class/
TR4	Not trained in SE but has 8 years teaching experience	3 learners have SENs out of 45 learners, VI (1), Writing (2)	X	Bring learners to the front I learner is upset, sends the learner home No special material/no IEP
TR5	No SE background, diploma in teaching/8 years' experience	48 learners with one socially maladjusted learner	Motherly care/ordinary teaching skills	No IEP for child No knowledge of how to prepare and IEP Does not vary strategies to entice learner to participate
TR6	Not specialised, but training in SEN	NOT observed but shared her experiences	Has knowledge of LSENs,	No IEP, has basic understanding of the Letters IEP
TR7	Primary & Secondary teachers diploma/ Hard of hearing/low vision No SE training	Taught a grade 2 class of HI	Purely specialised teaching/uses total communication/ Emotional signing while teaching	Teacher improvises own teaching/learning aids Teacher uses ordinary text book but explains it in sign language Initiative to adapt work, no guidelines/no IEP
TR8	Diploma in SE/2 Years' experience at special school	Taught LSENs, IC (8) & 1 PC Lesson: ADL skills	Skilled teacher/Worked under pressure alone/one learner became ill and needed constant attention to the	no syllabus, teacher has adapted level syllabus able to attend to individual learners

TR	DESCRIPTION	CLASS DESCRIPTION	POSITIVE COMMENTS	TEACHING SKILLS
			toilet	needs had challenges attending to hygiene and health needs of other learners
TR9	Two VI teachers team teaching/both are diploma in SE	Computer lesson to 11 VI learners	Team teaching introductory concepts to ICT for VI learners Both teachers are VI. Both have diploma in SE	No JAWS on some computers/ordinary key board used/no IEP/ No guidelines
TR10	Post linguistically deaf/ degree in SE/	Teaches deaf learners but not observed/discussion held	From discussion, teacher is conversant in sign language and has knowledge of content	Uses own initiative to adapt ordinary books to teach his learners No written guidelines Has samples of IEPs
TR11	Specialised teacher, degree in SE	Not observed, had a discussion of his experiences	Has knowledge of SEN, explains the challenges in his teaching	No IEP; said learners are too few for IEP. No guidelines
TR12	Not specialised Teachers VI learners in mainstream	Not observed, says she was giving notes	Basic ideas about VI learners in her class	No IEP; said learner is normal as everyone else except for vision

Source: generated by author from findings

The findings in the table 5.14 show consistency with other findings already presented. For instance, the failure by teachers to use the IEP as a required strategy has also come out here. The lack of materials also came out during post lesson discussions as shown in Table 5.13. The lack of skills observed and reported by some interviewed teachers during post-lesson discussions frustrates curriculum implementation. Similar to this study, Shanzi (2016) found that SETs faced challenges implementing the expanded core curriculum because of lack of syllabus guidelines among other challenges such as high pupil-teacher ratio, unfriendly school environment and the shortage of teaching and learning materials. Dalton et al. (2012) lamented, that lack of teacher skills in adapting the curriculum to meet the needs of LSENs was one of the factors that frustrated the inclusive education policy. From table 5.14 and the interviews, it was clear that there were no guidelines to help teachers implement the curriculum effectively.

5.4.5 Language-Related Challenges

One other challenge that is seemingly being ignored is the new language of instruction policy. Some ESOs and three observed teachers explained it as a challenge in the teaching of the HI learners. What exacerbates the situation is that, at the time of the study, books had not yet been adapted in the local languages and the teachers teaching HI learners in some districts were not natives of the local language. This challenge resurfaces among teachers of VI learners that the researcher observed using team teaching to go around the language challenge (*see 5.3.7.3. TR 9 verbatim*). The questionnaire also collected some responses though negligible in number referring to language as a barrier to the implementation of the 2013 curriculum.

The policy of using a familiar language of instruction also has an impact on the teaching and learning for HI learners. Observations were made by two ESOs that the lack of books in sign language had compounded the situation. This is because teachers who are trained to teach HI learners are posted to districts where they do not know the local languages and have to depend on native speakers to translate for them what is written in the syllabi for the mainstream learners for them to translate to the HI learners. But because such teachers are not native speakers of the local language in the areas where they have been deployed to teach, learners find it difficult to understand the type of sign language used by teachers. Teachers also find it difficult to sign certain words in those localities. Thus, compounded with the

difficulties in some terms in some subjects such as Mathematics, Science, Geography and Social Studies, teachers reach a deadlock when trying to explain to HI learners. ESO4 said:

“Especially for the HI using the same books yes, because like at lower they have to use the familiar language would say in that area, so in this case it has to be in Luvale but now you will discover that there are no books specifically in Luvale for the HI which have sign language so now they have to use the same books and now they start translating meaning when they are in Luvale because the HI usually they do not learn the Zambian language. So, it would mean they have to rely on the other teachers to help them or interpret and then write the words in English and that’s when they prepare their lesson plans, so that has quite been a challenge”.

ESO12 said:

“The vocabulary seems to be limited, they struggle and for the new ones, they are also learning so you find a teacher when they are teaching when they are stuck on a certain word, they would rather not mention it you find that they are skipping an important point, so they have a challenge there in sign language though they are trying”.

The 2012 Learning Achievement (MESVTEE) Survey Report established that 51% of the learners learned in the language spoken at home while 49% said they did not. The survey report cautioned implementers on the language of instruction policy implementation (MESVTEE 2013c). Many Zambian studies have pointed to inefficiencies in the current language of instruction policy.

Thus, many learners learning in schools are not taught in the language they are familiar with because of the nature of the multilingual society Zambia is. With more than 73 languages and dialects, it is difficult to provide learning in a familiar language in a class where there are many different learners with different languages spoken in their homes. Learners whose mother tongue is not the language of instruction would learn with difficulties. In this study, teachers expressed difficult in adapting the revised curriculum books due to limitation in sign language vocabulary. The teachers had to rely on others to help them read and make signs for the learners and yet the signs may be different due to different local language origins. This compromises quality education delivery to the HI learners. The teachers who are teaching HI learners and are non-native speakers of the local language where they teach become stressed

and may develop a dependency syndrome in that they have to find someone to interpret to them in order for them to teach. Compounded with lack of sign-language skills among many people in the Zambian society, it is not clear whether such teachers who are non-native speakers of the local language through which instruction is provided get the needed quality interpretations from their helpers who are not specialised in sign language. Research has shown that the familiar language of instruction policy has a negative impact on learning of learners without disabilities. Matafwali (2010) argues that Zambian children who are not familiar with the language of instruction might have problems in school learning to read particularly if they have been to preschool where the language of instruction is a third language, English. Njobvu, Hamooya & Bwalya (2013:112) also note that “the use of unfamiliar languages in the initial teaching of literacy greatly affects the reading of the children in schools and implored Government to ensure that the policy is well implemented in all parts of the country”. The same challenges of language of instruction can affect the learning of HI learners. Unless a standard Zambian sign language vocabulary is developed, learners with HIs will always struggle to learn. The MoGE needs to ensure that strategies are put in place to avert the situation because LSENs are not immune to the challenges this policy brings.

5.4.6 Challenges Related to lack of alternative and adapted curriculum

The 2013 curriculum framework says:

children with SEN will require adapted curriculum and adapted technology relevant to their disabilities. Learners with intellectual impairments as well as others with severe disabilities who cannot benefit from the inclusive curriculum will have an alternative curriculum that suits their needs and abilities” (MESVTEE 2013:21).

However, since the main curriculum was rolled out in 2014, the alternative curriculum for learners with severe disabilities has not been developed. This poses a challenge for teaching learners with severe disabilities. Books and syllabi have also not been adapted. The following extract is from a post lesson discussion with a VI teacher:

“The VI sir are learning through the main curriculum only that, these adaptation are usually done individually as you are planning you feel here, for my pupils to say for me to understand I have to especially for that who are visually impaired, sometimes you know to say, for me I can only understand if only somebody teaches

me.....eeee for example recently we had a lesson, a presentation off course we had to teach, during our T.G meeting where we identified some problems, then one of the problems we talked about for example how to teach primary colours, to a totally blind person, so we had toand then we said well this issue, it can only be taught through association” (TR 9).

There are many topics and lessons that may not apply to VI learners thereby posing challenges to effective learning. The visually impaired, especially those born blind or who lost their sight at a tender age may not have the concept of colours. Teaching and assessing them on the concept of colour is not possible. These concerns were also expressed by the teachers of learners with severe hearing impairments who have difficulties with certain signs already alluded to in the lack of adapted materials sub-theme.

When asked whether learners with VI write the same exam, the respondent (TR 9) affirms. *“Yes, they do. They write the same examination but with a lot of problems that we encounter as teachers”*. This was acknowledged by CSs and ESOs as well.

One other challenge in the implementation of the revised curriculum is the lack of adapted syllabuses for sign language. At the time of the study schools had not received adapted syllabuses that go with the revised curriculum. As a result, teachers especially those teaching HI learners are facing challenges with many new terms that have come with the revised curriculum. All teacher respondents that the researcher interacted with reported this challenge some even without being prompted. Below are some of the verbatim extracts from the respondents:

A Geography teacher (TR11) recounts,

“Aaaa...the main challenge it is the language. Because these guys, this English that we have it is a foreign language to them. So, you find that most of the language we communicate with them, we use the ordinary English them when it comes to writing, it is in a different way, they use short cuts. So, you find that the revised curriculum, eee let start with the advantages”

When asked to give examples of words that the teacher finds difficult signing in Geography, the teacher said:

“some of them.....more especially when you are dealing with the volcanos, the molten,

when you are talking about the molten those aqueous states of rocks, but when example you find the term aqueous states, how do you find a sign for that? Yes ... you find that you get the nearest word which is porridge. The rock turned into porridge. So that one has no sign apart from writing on the board, again if you write on the board, you have to break it. "This is the rock that has become porridge when there is too much heat, so again to their perspective, it becomes difficult, 'how could a rock become porridge'? Quite all right, you may teach them this it will change from one state to another because of this and that but again give them an exercise based on the same thing, they will write a different... they will write porridge, so Geography teaching the HI is quite challenging because of the terminologies that are used there".

The experience from the Geography teacher is not the only one. Deaf teachers at two schools encountered similar challenges in Mathematics, Science and Religious Education. One of the deaf teachers (TR10) explained:

"I try some of the things. Like circumference it's a new word, I have to consult from other teachers but if I fail I use finger spelling, 'spell circumference' but they do not understand then I leave it like that what can I do? because you will never find the word which is signed circumference, we will never (with emphasis and laughs)".

The teacher further explained the difficulties of teaching and assessing history to HI learners. He said:

"Some words which are difficult to deaf we make it less difficult for example 'write an account for Shaka', deaf cannot understand account. We need to change that word account and say 'explain the history for Shaka'. Deaf can understand but if you say account deaf will aa' me I have not done account, why' it's confusions again".

Another teacher (TR7) teaching learners with HIs recounted the experience of using un-adapted books in sign language. He said there are terms that are difficult to explain to learners with HI especially those that are deaf. He gave the following example:

"Marrow inside the bone there, where do you find the sign? Eee where blood is manufactured. Now you just improvise. You should bring the concrete object and show the bone marrow, this is bone marrow. Others are there like word amphibians,

how do you sign that? What next, you say the characteristics, they stay in water. No specific signs”.

In Religious Education, the teacher said:

“Yes, there are there! for example ‘sin’, We are talking about sinning there, the sign sin, now what is the meaning of this? Sin means breaking God’s commandments but for them, they will just do this (signs bad) you just sign ‘bad’“.

Language is a very important vehicle for delivering a curriculum effectively. Sign language, in this case, helps content delivery for HI learners. Before a curriculum is offloaded for implementation, adequate vocabulary through which the new content would be delivered should be developed. Sign language symbols should be universal for use in teaching and learning. Failure to consider sign language vocabulary development will continue to disadvantage learners with HIs.

5.4.7 Over-Enrolment as a Challenge to the Implementation of the Revised Curriculum for LSENs

Large classes were reported as a challenge for the implementation of the curriculum by SETs in this study. The challenge of large classes is not a new phenomenon in Zambian schools both in mainstream and special schools. For instance, MESVTEE (2013c) reported 49% of teachers teaching class sizes of over 120 learners. The average number of learners in 2012 was 45-60 learners (MESVTEE 2013c). Over enrollment in Zambian schools questions the practicality of inclusive education. This affects not only the teaching but the general way of professional conduct. For instance, in one of the classes where the researcher observed a teacher teaching learners with different disabilities, including two deaf learners, the teacher could not match the oral explanations and signing at the same time for the deaf learners to keep up with the pace of the lesson. When the researcher asked whether the teacher was able to sign at the right pace with oral language, she said,

“Sometimes I forget, am human, sometimes I forget I just talk forgetting that I have children with hearing impairment” (TR2).

Another teacher (TR6) emphasised the challenges saying:

“The biggest challenge is just over enrolment; you have to meet each child’s needs but in a case where you have more than 15 learners how do you meet the needs of

learners” ... “actually the challenge mostly I face or we face like handling a class of more, more members and then a challenge comes in like what happened in there, yes, you find you one person you are supposed to handle a lesson, the lesson should go on and the same person you are supposed to take that child to the toilet, the same person you supposed to bring that child so that is quite a challenge where by you are one teacher in that classroom so... “.

Although the challenge of larger classes is not directly caused by CDP, the MoGE needs to address this. Managing different disabilities in the same classroom that is overcrowded creates more stress on an already overburdened teacher who has to improvise materials to implement the curriculum.

5.5 RECOMMENDATIONS FROM TEACHERS

In view of the challenges discussed, SETs were asked how best they could be helped to implement the curriculum effectively. There were many responses provided but similar in character from all provinces. Thus, a cluster analysis in NVIVO provided a closer relationship in the responses between provinces. Table 5.15 demonstrates the relationship.

Table 5.15

Qualitative correlation of provincial responses on recommendations

Provinces	Pearson correlation coefficient
Southern – North Western	0.655512
Southern – Lusaka	0.668716
North Western – Lusaka	0.685998

There were no major differences between the responses from the three provinces about what should be provided to help effectively implement the 2013 curriculum for LSENs. What mainly came out as recommendations were clustered around the following points?

- To provide them with adequate, necessary and suitable specialised materials for teaching LSENs;
- The SETs need to be meeting so as to share on new ideas all the time;

- They need training and retraining on how to adapt the curriculum;
- They should be involved in planning from the beginning of CDP;
- SETs should be oriented in the use of modern devices for learning; and
- Improve learning infrastructure

The recommendations by teachers are a reflection of the challenges they are facing during curriculum implementation.

5.5.1 Challenges in Curriculum Implementation – CSs’ and ESOs’ views

CSs and ESOs discussed the challenges of curriculum implementation from the teacher perspective and their perspectives as well. One of the objectives of this study was to establish the challenges SETs faced implementing the curriculum. As stakeholders who oversee curriculum implementation, CSs and ESOs reported challenges teachers faced as well as the challenges they faced in supervising and monitoring curriculum implementation. Though one of the objectives of the study was to establish the challenges teachers face in implementing the curriculum, as stakeholders, the CSs and ESOs have their own challenges. Generally, both CSs and ESOs echoed the scarcity of funding to supervise curriculum implementation. CSs were affected by lack of funding to develop materials while ESOs are affected by funding to monitor and supervise curriculum implementation. The following verbatims reflect the challenges CSs and ESOs faced:

“The biggest challenge we find, I think the most difficult one are the resources. While we would want to come in and assist our teachers, we don’t have the resources specifically put aside for standard to carry out that activity, because as I said, that is a preserve of teacher education so you find that much of the work is done by teacher education. So as ESO our role is to ensure that what the teachers have been trained to do, they are doing it, now it becomes a challenge because our teachers have not been trained so when you go in the field you find that they are not doing what they are supposed to be doing” (ESO3).

“there is usually less input, not so much input is put in the area of SE, sometimes even the funds that maybe set apart they maybe for the general curriculum so, and when after the ...that’s when I don’t know that’s when now people will start saying what about SE, what about these people and funds will not be there they would have been exhausted, there will also be excuses like no we first have to develop the books that’s

when we can adapt them, because they have to use the same books the teachers have to print books in braille and alike” (CS1).

These statements are related. There seems to be negative attitudes toward funding of SE to implement the curriculum. CS2 lamented

“You know every time SE, they are always left behind, thus where the challenge is, we don’t start things at the same time. I will give an example, like when they started developing books, we were not given money to start rolling our programme, we were left out. They wanted first the so-called normal to start developing the book where as we were told there is no money, we were told we will start later on, thus where the challenge is, we don’t start things at the same time. The so-called will go ahead us we are always behind, thus where the challenge is. If only we can roll the programme at the same time, it will be better, because when we started developing the syllabus we developed at the same time but when to developing books, we were left behind. Even when orienting teachers, we just did it generally, we were told you will do it later, up to today”.

The statement shows stakeholders not happy with the way the implementation of the curriculum for LSENs is done suggesting that discrimination still exists and that priority for the development of material is given to the mainstream curriculum. On explaining the challenges teachers faced in implementing the revised curriculum, all ESOs mentioned the lack of materials adapted for LSENs.

“Yaaa the teachers and the head teachers we have been interacting with I think they are complaining in terms of the lack of materials especially teachers handbooks which means a lot of work for them to get these for the mainstream and then you translate them to the....they are saying it’s a lot of work, so to them it’s really something that we can still say they are behind and then may not be doing the right things”. (ESO1).

ESO1 further says:

“Although for the children with special needs they also have also their own eeee....in terms of materials they have a challenge because it’s like they concentrated on the mainstream in terms of printing, publishing books and they are saying they will only start printing for students publishing books after they are through with the other.

Otherwise in terms of materials, the only materials material we have for children with SE needs is maybe the curriculum is there, and maybe the syllabus is there but we don't have the teachers' handbook, we don't have the pupils' book they haven't yet started printing for those.

ESO5 and CS1 expressed disappointment at the lack of materials 3-4 years after the revised curriculum was first implemented yet LSENs were writing the same exams based on the same curriculum. Below is what they said:

"If materials are there, there are in may be infra ready stage being printed, but am talking about the period, I have talked about, it's the fifth year, 2014 to 2017 this is the fourth year, third year? So we are in the fourth year, and these materials are not there and all the levels of examinations have been done. We have done three years for senior secondary, and we have done two years for junior primary three years for primary" (ESO5).

"Yayaya....sure ...we are quite behind, because the others, this year is it 2013, there looking at grades 1, 2, 5 and 6. 2015 grade 2-6. They were just looking at mainstream. This year, the grades 12 are sitting for first examination based on the revised curriculum. Last year the grade 9s sat. But for SE we have not adapted anything we can't say the revised curriculum is being implemented in any special school". (CS1).

When further asked whether the learners were examined on the previous curriculum or on the revised and whether LSENs were advantaged or not, CS1 said:

*"No, they are also sitting on the same revised curriculum but not adapted for them
"Definitely, they are very much disadvantaged, very very much".*

The other CS was asked by the researcher; "but how fair are we to implement the curriculum to LSENs later than the rest?" CS2 answered:

"I have already told you sir! it's not us, it's the system which has made us to roll our curriculum behind, it's not my wish. My wish would be at the same time".

One of the teachers (TR11) recounted that there was a higher failure of learners' with disabilities in 2015 following the revised examinations curriculum. Below is what he said:

“Yes, but it forced the Examinations Council of Zambia 2015, they came because they discovered that countrywide there was poor performance. Only (mentions his school) produced three and it was the highest in the country in SE. So we told them, like the concepts of these children if you look at the level of knowledge, some concepts does not apply to them. Mostly their knowledge is based in knowledge, yes, if you look at Blooms taxonomy, their mind set just ends in knowledge, analysis and synthesis is not there, for example you bring the question of ‘outline’, when you say ‘outline’ meaning that you have to put a line. So ‘outline’ in sign language it means something else. They can just understand the question of name, mention, list, probably maybe explain but if you marry the word ‘explain why’, it becomes a different issue. Unless you ask one word each at a time for example, why, this it has happened like that or explain the reasons for that but if you explain why this has happened, the concept of ‘explain why’ doesn’t exists. So they said aaa, give us a bit of time, maybe this year they will write a revised exams specifically for them written in their formats”.

Critical theorists should be able to advocate for the LSENs. Disability is already a disadvantage. It is not fair to subject a disabled learner to poor learning conditions and unfair assessment resulting from an unadapted curriculum. Muzata (2015) advises education practitioners not to use educational assessment as a discriminatory tool by giving assessment tasks that are not user friendly to learners with disabilities.

Other challenges reported by SETs such as inadequate sign language vocabulary was reported by ESOs.

“For example, the, although we have not seen the book so much, but if you look at the books which have been published, like for the grade ones and so on these are actually have been published in local languages. Yet there is no sign language or sighted language. So actually HI, they are actually of the disadvantages part, the books are, yes, not in sign language” (ESO2).

ESO2 explained that though the teachers were trying to implement the curriculum using the few materials for mainstream learners, they may not be doing it effectively:

“Yaa! anyway they are able because in the interim they have the curriculum itself, they the syllabi, they are able to follow even what is in the syllabi and even to use the same materials which I was saying from the mainstream. Though you know where

people where each one is doing it in his own way it may not be exact where maybe you have same materials I know there are some changes and some maybe here there and it may not be according to what you might expect. “Yes, they are trying but it’s a bit difficult; others might be misguided because the instructions for example, are we see let’s say literacy”.

The other challenge ESOs raised was the inadequacy of specialised teachers to teach Mathematics.

“The VI are not learning Mathematics. We have not trained the teacher. The few teachers who were trained previously in Zambia at ZAMISE are no longer there. They are now standards officers, they are what and so on, or they are no teachers to teach braille Mathematics notations, there are no teachers to teach braille science notation in the schools”. ESO 5

The point being explained in the above extract is that there are inconsistencies in policy where people are trained to teach certain specialised subjects but they are promoted and transferred to different positions without replacement of the same quality of teachers. The ESO further explained the lack of sign language experts in teacher training institutions and the lack of a disability policy. Many institutions training teachers in Zambia do not have a disability policy guiding the training of the disabled. The current curriculum framework suggests the teaching of sign language and braille to all trainee teachers. However, it is important for the MoGE to consider training teachers that have already graduated and are already serving in schools as well.

CS1 also mentioned lack of specialised human resource personnel especially in procurement.

“One of the challenges is that we do not have enough human resource, we don’t have what I can call expert departments, we ordered some braille frame, they brought us wrong things, we bought gloves they brought us wrong things. We have a challenge of procuring things because these things are not bought locally and our procurement officers are not very much aware of these things”.

Other challenges ESOs thought affected the implementation of the curriculum were lack of involvement of key stakeholders and lack of collaboration between key education departments and directorates.

“The only challenge we have is that when it comes to implementation, it no longer becomes the issue of ESO, it goes to another department which is called teacher education. And under teacher education, we also have someone who is in charge of SE (name) yes. I think he will be able to answer that question although he.....the time we started this activity, he was not in the office, and I don’t think, the one who was in the office was highly involved, because I was one of those who was involved in workshops which were going around but, that why I was saying, rarely did we meet anyone from SE” (ESO3).

The need for involvement and collaboration with all stakeholders in CDP helps to bring to the fore the need for contributions from all stakeholders to the curriculum for LSENs. Involving teachers and collaborating with them in curriculum design strengthens the quality of the curriculum. Voogt, Pieters and Handelzalts (2016:130), in exploring empirical evidence when teachers co-design and contribute to professional development and curriculum change, reported that “teachers’ involvement in design resulted in improved curriculum design practices and consequently curricula with higher quality according to teachers and managers. Teachers learn how to use a systematic approach by using procedures and templates”.

When collaboration in CDP is high, stakeholders easily know their roles and share experiences with other departments. In a curriculum where departments work in isolation, each department may be doing things differently. The same applies when teachers work in isolation. In this study, participants reiterated the need for collaboration if curriculum implementation for LSENs is to be effective:

“You know me, one thing that I have discovered, as major hindrance to teaching of learners with disabilities is, we don’t coordinate. There is no collaboration. You find, the DPOs are doing things on their own, the universities are doing things, disability people organisations, teacher education is doing its own things and within the Ministry also they are these fragmentations then when you go outside it’s also the same because look if all this was well collaborated it was going to have very few problems, but because I think people forget about other groups of stakeholders you find there are a lot of problems and you know this thing under SE, it must link to what is in this policy, it must link to what is in this policy. (ESO5).

ESO5 further explained the impact of lack of collaboration on curriculum implementation:

“There are issues here which are not in the Education Act, so this one is not talking to the Education Act, they are not talking to each.... and all these policies they are not talking to each other, so what we need is even us we need to talk to each other, to come up with the curriculum, because you, you are training teachers, who will go in the schools, they will find things like this, and they will start asking questions, now if imagine you were not part of the people who developed this, or who developed the education and whatever curriculum, you will find it very difficult to answer these questions, so there is, we need to collaborate as stakeholders in teaching or in developing curricula in SE. yeah that why even today, we don't have course books for LSEN because there was no collaboration and if these books will come out they will not come to you, you see, you will not know there are these books, no....you be there teaching, teaching then your learners will go and find these books in the field, which is not correct. They are supposed to find them in the universities, in the college, because even me I don't think I will have those books unless I just ask”.

The point being raised on lack of collaboration poses a threat to the provision of quality services to not only learners but to people with disabilities in general. The nature of collaboration being proposed by participants is where departments should work together in coming up with a curriculum that every stakeholder would hold ownership of. According to Voogt, Pieters, & Handelzalts, (2016:121), “teacher professional development through collaborative design in teams, which is specific and linked to the curriculum, influences teachers’ knowledge and practice and impacts implementation of curriculum change.” Where teachers have the autonomy to meet in groups according to their expertise, they have the opportunity to understand curriculum change, design and develop materials for the implementation of the change. In this type of collaborative design, the top down influence does not exist and the teacher feels the sense of ownership of the curriculum. The department that oversees teacher education would become facilitators that would empower the said teachers with skills and knowledge to design, develop and implement the curriculum through their knowledge communities. Of course as the participants have alluded, collaboration should start from the top by the different departments such as CDC, Teacher Education and Specialised Services, teacher education institutions and education standards but their ultimate aim should be to empower the teacher to be able to design, develop and implement the curriculum.

5.6 CHAPTER SUMMARY

This chapter analysed, presented and discussed the results and findings of the study on the implementation of the revised curriculum to LSENs in selected special and inclusive schools in Zambia. Both quantitative and qualitative data has been presented in a convergent parallel format to provide sound conclusions. From the quantitative part, data was analysed using SPSS version 16. Data were subjected to rigorous analysis through establishing frequencies, percentages, means, standard deviations, significant differences and correlations. The use of the different analyses yielded the same conclusions, thereby confirming the effectiveness of the analysis tools used. Qualitative data was analysed thematically by use of NVIVO pro version 10. The software helped to sort out data into categories of similarities and differences and helped to analyse the density of responses that emerged. Thus cluster, cloud, text query, word similarity query, comparison query, and Pearson correlation tests were run on different themes to make meaning out of the qualitative data. The findings were later compared with the quantitative data.

The next chapter presents the conclusion, contributions to the body of knowledge, implications and recommendations for the study, research limitations and concluding remarks. The chapter has also discussed the gaps in collaboration and their impact and the explained how the study links to the theory adopted.

CHAPTER 6:

CONCLUSION AND RECOMMENDATIONS

6.1 CONCLUSION

The study has revealed that the CDP for the 2013 revised curriculum in Zambia ignored major stakeholders such as SETs at most stages except at implementation.

The study established that:

- SETs and ESOs were not involved at most stages of CDP except at implementation.
- There were generally no significant differences in the results from different provinces, meaning that SETs were generally not involved in the CDP.
- Teachers showed limited understanding of curriculum adaptation for LSENs. This contributed to lack of effective curriculum implementation. Though generally teachers had poor understanding of the concept of curriculum adaptation, Lusaka province teachers were better in understanding the concept, followed by North Western and Southern Provinces. Ministry officials had a much better understanding of the curriculum change and its benefits to LSENs than teachers.
- LSENs are learning through the ordinary curriculum i.e. there is no alternative curriculum and there are no adapted teaching resources, syllabuses in sign language or braille. Teachers use their own initiative to adapt the curriculum.
- A significant relationship was established between SETs that were qualified and specialised in the field of SE and their understanding of the concepts involved in curriculum adaptation for LSENs. Specialised and qualified teachers in special education were more likely to understand the concepts of curriculum adaptation, a key strategy for SE curriculum implementation, than teachers that were not trained or qualified in SE but teaching LSENs in inclusive schools.
- Further significant relationships were established between qualifications, and the type of school where teachers were drawn from with the practice of IEP. SETs that were qualified in SE and were teaching in special schools or units were more likely to use IEPs than those from inclusive schools. Understanding the IEP and its application is related to teacher-preparation and training. Teachers that were teaching LSENs in inclusive schools were not trained in SE.

- Training in the revised curriculum was inadequate and focused on the general curriculum. It did not focus on SE. Teachers were generally oriented on the 2013 curriculum but not on its application to SE. There was no training on curriculum adaptation for LSENs.
- There were no guidelines to help SETs implement the revised curriculum.
- Teachers faced numerous challenges when implementing the revised curriculum to LSENs due to mainly lack of adapted curriculum, specialised assistive devices, alternative curriculum, guidelines and learners' books among other challenges.
- ESOs also faced challenges in ensuring that the curriculum was well implemented by teachers because of lack of funding and capacity to ensure monitoring and the lack of teaching and learning.
- CSs also observed challenges of funding of SE departments that affected the development of the alternative and adapted curriculum for LSENs.
- Qualitative responses showed that the education system has a negative attitude in its approach to the implementation of the curriculum to LSENs.

The above results and findings call for review of the whole process to improve curriculum implementation. However, despite the numerous challenges in the implementation of the curriculum, the following positive points about the implementation were noted;

- SETs qualifications were of acceptable standard with mostly diploma and degree graduates teaching LSENs. It was further encouraging that there were some SETs that possessed master's degrees in SE teaching at primary and secondary schools (see results on table 5.1). A diploma should be the minimum qualification for a teacher to teach in a primary school in Zambia. Teacher qualifications are a positive indicator for effective curriculum implementation.
- There were more specialised teachers especially in special schools captured in the study, indicating that the MoGE's effort to address quality education service for LSENs is starting to pay dividends.
- SETs portrayed a positive attitude towards the implementation of the curriculum by making efforts to improvise teaching and learning aids and employing strategies by using knowledge and skills learned from universities and colleges of education.
- SETs and ESOs showed positive attitude towards the revised curriculum and appreciate the content in the NFC as worthy the quality of education for LSENs.

- ESOs' sound understanding of the curriculum change shows that there is adequate human resource to help retrain SETs to understand the curriculum change that took place in Zambia.

6.2 THE GAPS IN COLLABORATION AND THE IMPACT ON CURRICULUM IMPLEMENTATION

One lamentation that came out especially from ESOs showing a big gap in the CDP that led to the birth of the 2013 curriculum is the lack of collaboration. Lack of collaboration relates to lack of involvement and participation in CDP. This in general is what this study established. Figure 6.1 provides a graphic overview of the gaps in collaboration and the resultant effects on the teacher implementing the curriculum.

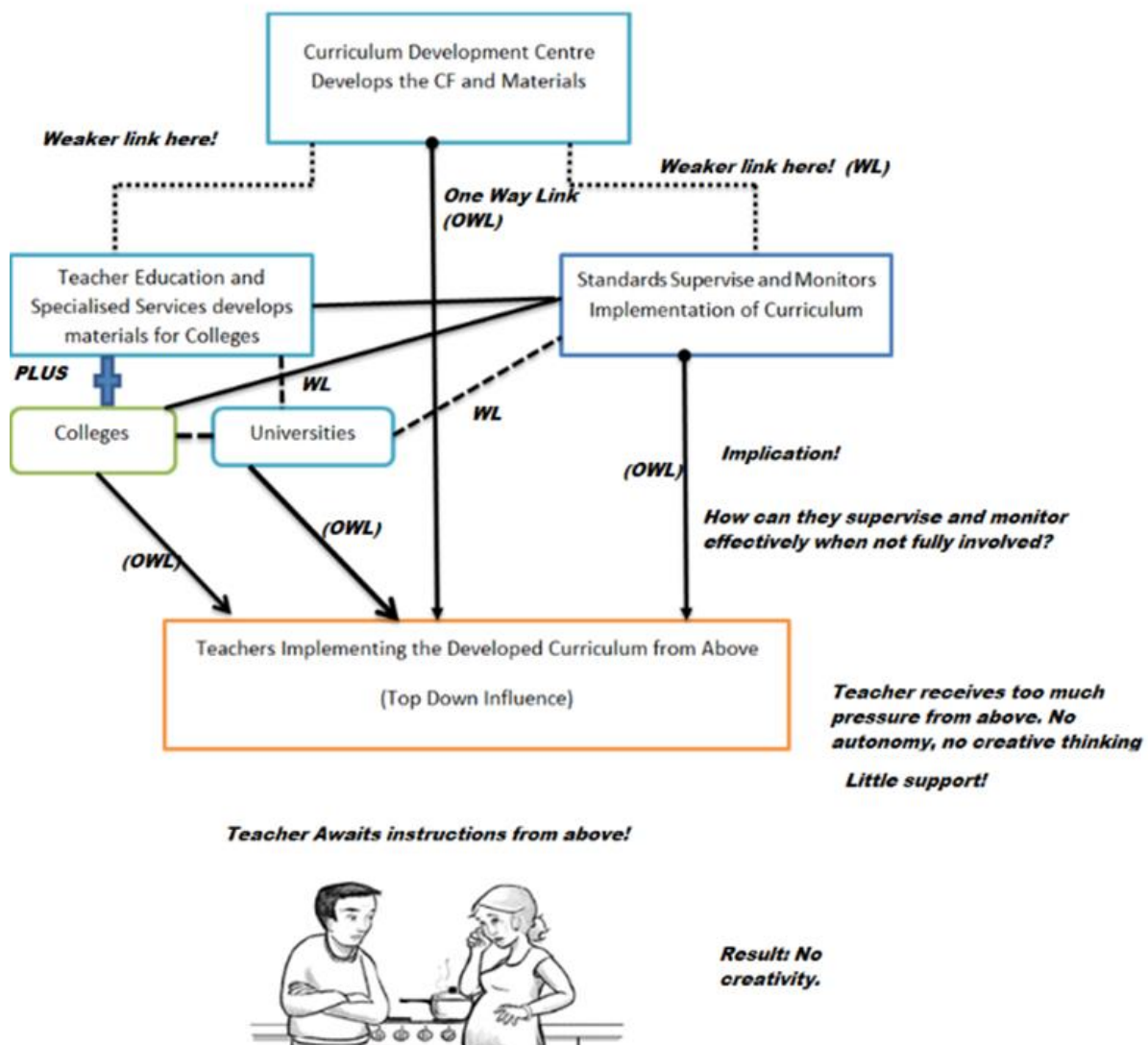


Figure 6.1: Author's interpretation of the current curriculum implementation process

Figure 6.1 above shows the connections between the factors impacting implementation of the revised curriculum. The CDC is the body in charge of curriculum design. It develops the curriculum, materials and spearheads the implementation process. From the findings, the CDC has a direct link with teachers so that they can implement the curriculum they have designed. There is a thick line showing that interaction is one way. Teachers have minimal say in the process. The CDC further shows a weaker link (WL) with teacher education and standards yet all these are active stakeholders in the CDP and especially in the implementation process. Colleges and universities training teachers are graduating teachers on an old curriculum yet schools have a revised curriculum. Teacher-training institutions have little or no say on what should be in the revised curriculum. Teachers are the recipients of the training and do not provide feedback to the colleges and universities that trained them on the variance between the training received and what is on the ground so that the training institutions can modify their training curriculum. Thus, a stronger One Way Link (OWL) to the teacher exists than away from the teacher. The Standards Education Office expects teachers to implement a curriculum in which they themselves were not adequately involved. They are also aware that SETs are not adequately prepared for the curriculum implementation, but expect good standards of teaching and learning. From the diagram, there is a lot of pressure on the teacher expected to implement a new curriculum without resources, with inadequate knowledge and lack of skills. That the teacher does not communicate upwards shows a top-down model of curriculum implementation in which the teacher is simply a recipient of instructions required to be implemented with or without the necessary support.

However, the results of such a model are deleterious to the quality of education delivered. The teacher becomes non-innovative, non-creative and may give excuses for the failure to yield the results intended by the curriculum. With regard to SE, teachers have no authority, for instance, to remove a topic that does not favour some LSENs from a syllabus. They have to wait for instructions from the top. Thus, the teacher lacks autonomy to adapt the curriculum to fit the learning of LSENs. The top-down model of curriculum development makes teachers avoid taking responsibility for failures in the implementation process. Kobiah (2016), in Kenya, observed that the top-down model of curriculum development model controlled by Kenya Institute of Curriculum Development is largely centrally-controlled and the experiences and talents of teachers are untapped and under-utilised during CDP. This is no different from any other country that practises the top-down model in curriculum

development. Teachers cannot take ownership of the curriculum. They are like employees employed to implement what the designer has made. When such a thing happens, teachers face enormous challenges. When there is no sense of ownership, teachers blame the authorities for failure of the implementation at the bottom. The process in turn frustrates the learner who then receives mediocre services.

Basically, the problem of involvement in the CDP does not lie with the teachers. It lies in the top structures that wish to own the process and treat the teacher as a consumer just like the learner. This thesis suggests a decentralised CDP that empowers teachers with a sense of autonomy to be active planners, creators, implementers and evaluators of the curriculum. CDC experts can work as facilitators with the expertise to further empower teachers to engage in active curriculum improvement. CDC can create platforms for continuous deliberations about the curriculum process.

The challenges ESOs described are no different from those of SETs and CSs. With such challenges, the effective implementation of the curriculum especially to LSENs would be compromised. The stakeholders questioned why materials for the implementation of the curriculum could not be developed alongside those for learners without disabilities in mainstream school. Several sentiments from participants point to anti-inclusive policy practice. Participants felt the curriculum seemed to have been made for the mainstream learners and not LSENs, all because most of the challenges have centred on the lack of involvement of stakeholders and the lack of materials for the implementation of the curriculum for LSENs.

6.3 HOW THE STUDY LINKS TO THEORY

This study was guided by the Deliberative Curriculum Theory of Kridel (2010) who observed that curriculum development has a component that deals with issues of implementation and deliberation. Figure 6.2 is a suggested representation of an ideal curriculum implementation process using ideas from Kridel's (2010) Deliberative Curriculum theory:

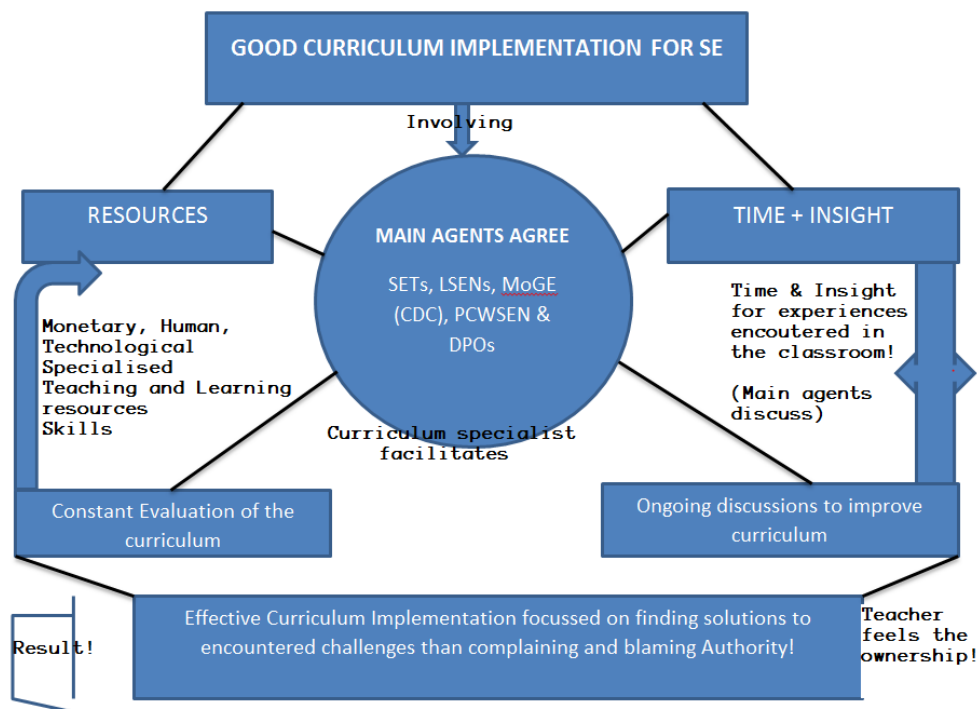


Figure 6.2: Author's application of Kridel's (2010) Deliberative Curriculum Theory

Figure 6.2 emphasises involvement of main stakeholders in CDP. It shows that a group of stakeholders must be in agreement about what should be taught/learned, how and when the teaching and learning should take place. They must agree about the nature of support to be given to the teacher and the LSENs. Allowing time to evaluate and have ongoing discussions about what the stakeholders have agreed creates an evolving circle of curriculum improvement. However, the results of this study seem to fall short of the key features in Kridel's Deliberative Curriculum Development Theory. For instance, this study established that key players such as SETs were not involved in curriculum development and were facing numerous challenges in implementing the curriculum. Although one of the reasons for unsuccessful curriculum implementation forwarded by Igbokwe et al. (2014) is lack of political will, the challenges surrounding curriculum implementation in Zambia may be said to lie more in lack of resources. Political will seems to have been demonstrated through the development of the 2013 curriculum framework. The next gesture of political will need to be seen through channelling of resources towards the implementation of the curriculum for LSENs, otherwise, failure to do so will lead to society thinking discrimination against disability still exists. It is acknowledged that the problem of funding cripples plans to improve the quality of education for LSENs. In countries where schools are funded and given the autonomy to design and develop curriculum, learners benefit from quality education

delivery and teachers feel a sense of satisfaction, ownership and a sense of being important to the process. For instance, in Netherlands, there are different acts guiding funding of both private and public schools with emphasis placed on improved quality of teaching and incentives (UNESCO-IBE 2012). Eurydice (2008) also acknowledges that teachers in most countries in Europe have responsibilities emanating from a decentralised education system. In emphasising the value of a decentralised education system in Europe, Eurydice (2008: 9) said;

It is expected that this new-found autonomy and the freedom which in principle goes with it will lead teachers to develop their creativity and ability to innovate, while becoming more actively engaged and thus more motivated, and encourage more differentiated provision better suited to the heterogeneity of the school population that has occurred with 'mass secondary education' and comprehensive education.

In line with the above citation, part of the problems SETs in Zambia are encountering in the implementation of the 2013 curriculum relates to lack of autonomy for teachers and schools. The top-down practice of curriculum development in Zambia robs the teachers of their autonomy as individuals and, in the case of this study, to develop adapted curriculum from the main curriculum because of fear for authority at the top. But this is not supposed to be case in education. Just as Pinnar (2004:249) noted:

The point of public education is not to become accountable, forced through modes of address to positions of gracious submission to the political and business status quo. The point of public education is to become an individual, a citizen, a human subject engaged with intelligence and passion in the problems and pleasures of his or her life, problems and pleasures bound up with the problems and pleasures of everyone else in the nation, on this planet.

Although autonomy may better be realised when resources and especially funding is available, if schools are granted autonomy to implement new ideas, they would work hard to come up with ways to implement the curriculum. But as this study established, the top-down model restricts teacher creativity and innovation (as demonstrated in Figure 6.1). Teachers have to wait from the top for instructions on how to implement the curriculum. From the deliberative curriculum perspective, resources, whether in terms of funding or skills are easily achievable through deliberation i.e. stakeholders would agree on how to access resources for curriculum implementation. For as long as the aspect of deliberation misses, stakeholders would be left to wonder how best they can implement what has been planned in the curriculum. This is the reason, a deliberative curriculum theory brings to the fore the concept

of inclusivity in curriculum development. To believe as Tabulawo (2013), Kalimaposo (2010) and Musonda (1999) said that inconsistencies especially in curriculum implementation in Sub-Saharan Africa are a result of changes engineered by outside donors is to think that donors should not be part of the deliberations on any nation's curriculum; yet, they are part of the global village and active partners especially in advocacy and funding of the implementation of policies that promote inclusiveness.

6.4 CONTRIBUTIONS TO THE BODY OF KNOWLEDGE

This study has contributed to the body of knowledge and covered certain gaps. While the background to curriculum change was given about the general curriculum, there was none on SE specifically. This study provided a platform for respondents to analyse and relate the curriculum to SE. SETs and other stakeholders need this kind of background to be able to appreciate the change. The study further explored the benefits of the revised curriculum for SE. Thus, respondents were engaged in constant reflection of their role in CDP. The study revealed that SETs were not involved at most stages of the CDP except at implementation leading to scant understanding of the process by SETs. The lack of involvement at most stages of CDP reveals a top-down model of curriculum development in Zambia. Though they were not involved at most levels of the CDP, they appreciated the call for effective implementation. The study provides ground for both curriculum designers and teacher trainers to improve training and ensure quality teachers are produced to implement the curriculum for challenged learners.

6.5 IMPLICATIONS AND RECOMMENDATIONS

In view of the results and findings for this study, it is important to reflect on several areas of weaknesses and improve our practices to improve the quality of education for LSENs. This study had four sub research questions. The research questions focused on involvement of SETs in CDP, how the SETs were implementing the 2013 curriculum, the challenges SETs were facing in curriculum implementation and the strategies they employed to meet the learning needs of LSENs. The recommendations from this study have therefore been tailored to addressing the aching issues regarding the four research questions.

6.5.1 Recommendations to the Ministry of General Education

The aspect of involvement in CDP is crucial for effective implementation of the curriculum. The major driver of involvement of the curriculum is the MoGE. The extent of involvement

and the nature of challenges SETs are facing may lead stakeholders to think that they are being ignored due to the historical negative perceptions toward the field of SE. In this regard, the following recommendations may help to ensure that curriculum development in general and its implementation in particular is inclusive. The MoGE should:

- Consult and involve SETs in the CDP. SE is a specialised area and requires maximum input from SETs at all levels. This study revealed alarming minimum levels of under-involvement of SETs in CDP generally although they were involved naturally at implementation by virtue of their teaching obligation. Failure to involve SETs in CDP creates scanty knowledge of the process and its implementation. The implication of not involving SETs in CDP creates an image of discrimination against special education as a profession and children with disabilities as beneficiaries. This is against the principles of inclusiveness and the attainment of SDGs becomes questionable in any country that practices discrimination.
- Prepare SETs for curriculum implementation through training and retraining. Although teachers were trained generally, the study reveals that no training specifically tailored on how to adapt the 2013 curriculum was offered. Failure to train SETs on how to implement the 2013 curriculum has shown teachers misunderstanding of the whole CDP. This study has revealed that SETs struggle to implement the curriculum to LSENs. SETs for instance do not understand key concepts in special education curriculum implementation such as curriculum adaptation and IEP. The IEP is not fully utilised to benefit LSENs. SETs further do not understand fully the strategies for curriculum adaptation. This has implications on the quality of learning delivered to LSENs. Although this reflects on teacher training and teacher competence, the 2013 curriculum implementation needed to identify such weaknesses, close the gap and implement the curriculum effectively. This was possible through training and retraining.
- Involve teacher education institutions in the development of curriculum. Since the phase has already passed, the need to seriously engage teacher training institutions to align their curriculum to the 2013 curriculum needs to be speeded up. Currently, to date, some teacher education institutions are still training teachers using the old curriculum yet schools started implementing the revised curriculum in 2014. The failure to involve teacher education institutions has far fetching negative implications on the quality of teachers that should implement the curriculum effectively. As it is, teacher education institutions are still training teachers on the old curriculum. The gap is still widening and

SETs will continue to face many challenges in offering quality education to LSENs if this is not addressed in the short term.

- Consider as cardinal and urgent a need to decentralise CDC. There are too many gaps in curriculum implementation. Decentralising CDC would improve efficiency in curriculum implementation. The MoGE should spearhead this proposal. The results of this study show that CDC, mandated to oversee curriculum development is highly centralised and overwhelmed with curriculum responsibilities. SETs lack of involvement and knowledge of curriculum implementation demonstrates a lack or weaker presence of curriculum committees and established curriculum positions at provincial and district levels. Curriculum committees can help provide continuous professional development to ensure teachers are abreast with change. With curriculum committees and established curriculum representation at lower levels of the education system, teachers would have the autonomy to develop materials and strategies for effective curriculum implementation in their contexts. The lack of a decentralised CDC seems to portray a top down practice for curriculum development in Zambia. The top down practice in curriculum development has negative implications on teacher autonomy. Teacher independence is critical in making appropriate decisions for the learners they interact with. This is possible when teachers are empowered with knowledge, skills and autonomy to change, modify or adapt teaching and learning to that which suits their LSENs. As it is now, the CDC should embark on training and retraining of SETs in the whole curriculum process that took place in order for SETs to appreciate the change. SETs need to be engaged in constant deliberations to ensure that they are aware about why the curriculum changed as it relates to SE and provide training on how to adapt it. With the expertise at MoGE headquarters, provincial and district levels (through SESOs and ESOs for special education, DPOs, teacher trainers and other interested groups in SE) coupled with a well coordinated collaborative system, this task can be accomplished to ensure quality education for LSENs is delivered.
- Deploy specialised teachers to inclusive schools as well while ensuring that all teachers have knowledge and skills to handle LSENs in inclusive classrooms.
- Introduce SE content, skills and knowledge to all teachers training to teach all subjects such as Science, Mathematics, Geography, Civic Education, Religious Education, History and other subjects to prepare them to teach in inclusive schools. This will help overcome the challenges related to methods and strategies for implementing the curriculum to LSENs. Further, it will help overcome negative attitudes and make teachers appreciate

diversity and research possible ways to improve the teaching of LSENs in their respective subjects. Thus, for instance, a teacher who specialises in Mathematics or Science with special education knowledge and skills will understand how to teach such subjects to LSENs and be able to adapt lessons for different needs. The curriculum should be the driver for such inclusive approaches to teaching and learning.

- Develop teaching and learning materials for LSENs side-by-side with the mainstream school materials. This will help LSENs not to lag behind during implementation and will overcome unfairness in assessment. The lack of adapted materials for implementation of the curriculum has created unbearable inertia on the SETs. Lack of adapted materials including syllabi disadvantages LSENs participation in education assessment. These are attributes that are working against the concept of inclusive education. It does not reflect well on our society to demonstrate through policy documentation that we practice inclusive education and not in practice.

6.5.2 Recommendations for SETs

It was good to find through this study that some SETs employed various strategies to implement the curriculum amidst several challenges. The following recommendations are worth considering. SET associations need to:

- Take keen interest in curriculum development issues and advocate for support and non-discriminatory implementation of the curriculum.
- Fight for enactment of laws that allow Government to put effort into the education of LSENs.
- Develop learning materials for LSENs and seek avenues for publication of materials in order to enrich the field of SE.
- Advocate for curriculum implementation guidelines that provide for fair teaching, learning and assessment of LSENs. For instance, subjecting LSENs to certain content when it is well-known that they cannot learn it due to their disability is technical discrimination.

6.5.3 Recommendations for Future Research

There is a need to do extensive research in many other areas apart from curriculum development for LSENs. The following recommendations are made:

- Study the pedagogy for LSENs according to the different categories of disabilities in relation to the curriculum. The current study focused on curriculum in general and did not specifically look into how LSENs themselves are experiencing the curriculum.
- Examine possibilities for parental involvement in curriculum development. Parents' involvement especially in CDP is cardinal to the realisation of their children's rights to education.
- Explore the possibility of involvement of LSENs in curriculum development. There seems to be belief that children cannot participate in decisions about their learning. However, a study could reveal more about how best children can contribute to their own curriculum.
- There is need to explore and review the concept of inclusive education as practiced in Zambia. Currently, there seems to be a limited understanding of the concept of inclusive education skewed towards disability. Once we broaden our understanding of inclusive education to meeting the needs of marginalised persons in society, methodologies for teaching and learning would be developed to meet all learners' needs including those with disabilities. With such an approach in place, all teachers would be trained in inclusive methodologies and strategies for meeting the needs of all learners including learners with disabilities.

6.6. RESEARCH LIMITATIONS

Limitations are an old component of research reports or studies. They need to be documented. According to Sevilla, Ochave, Punsalan, Regala & Uriarte (1992), a limitation is a phase or aspect of the investigation which may affect the result adversely but over which the researcher has no control. Best & Kahn (2008:39) defines limitations as "those conditions beyond the control of the researcher that may place restrictions on the conclusions of the study and their application to other situations." Limitations are weaknesses in a study usually beyond the researcher's control. The assumption is that everything we do as humans should have limitations of some kind and stating such limitations helps future researchers to take precautions. Sevilla et al (1992) say researchers should state limitations very honestly. Ioannidis (2007) says limitations are important to understand for placing the research findings in context, interpreting the validity of the scientific work, and ascribing a level to the conclusions of published research. Ioannidis (2007) observed many researchers did not

consider limitations as an important aspect in research. Researchers need to be mindful that studies that they undertake may have limiting factors that threaten the quality of data. Such mindfulness requires that researchers are truthful and state the possible hazards to the quality of their data or study so that future studies can fill such gaps.

In this study, a few limitations were noted:

- The deaf have their own culture. Sign language is the conduit for deaf culture. Levy Vygotsky's theory of Social Cultural Constructivism argues that learning can best be understood in the context of one's culture. One interesting aspect that ignited the researcher's thinking during data collection was the challenge of language of instruction. I thought; "to understand fully the challenges of curriculum implementation for learners who are deaf and being taught by deaf teachers", the researcher needed longer time, if anything an ethnographic study design. This would have enabled the researcher to understand deaf culture in full and how sign language specifically may be a challenge to teaching and learning of the deaf learners.
- In the study, the researcher used lesson observations as one of the methods for data collection. Observation checklists were used. Ary, Jacobs, Sorensen & Razavieh (2010: 17) say "Observation in the social sciences is often less objective because it more frequently involves interpretation on the part of the observers. For example, the subject matter for investigation is often a person's responses to the behavior of others. Motives, values, and attitudes are not open to inspection". Observations have their own limitations mostly related to participant simulation on one hand and the observer's subjective interpretation. Participants can perform well during an observed lesson to be able to appease the observer. Participant observation or ethnographic designs would have helped reduce on simulation because no one can pretend for longer period of stay with them. There could be more difficulties than what was seen during observation.
- Observations are naturally time consuming and costly. The researcher observed lessons in two provinces. It was difficult to observe lessons in the 3rd province because of the geographical distribution of respondents. Thus time and cost implications limited the researcher's observation net. Since the results demonstrated differences in terms of understanding the concept of curriculum adaptation between

provinces where respondents were drawn from, comparisons in observations between provinces could have added flavour to the study.

- Sampling was difficult for CSs because they were only four substantive CSs in SE department at CDC. To pick on all wouldn't have worked well for anonymity. Two were picked for the study. The representation from CDC may not have been adequate although the results seem to agree with what was found from ESOs and SETs.
- The researcher was very confident that he would find ESOs for SE in the districts targeted. However, he found that some districts did not have ESOs for SE. Each ESO for SE is given responsibility to man two districts but due to administrative challenges, some districts didn't have ESOs for SE. As a result, ESOs that were responsible for two districts mainly focussed their duties of supervising and monitoring curriculum implementation on one district. Such ESOs were more competently able to talk about what was happening in the district where they were stationed and not the other. The researcher could have benefited more from ESOs' narration of curriculum implementation from both districts. This prompted the researcher to use some ESOs for SE in other districts within the province. Although the chances of misrepresenting views are slim, ESOs from the same districts as teacher respondents would have provided similar experiences in curriculum implementation as the teachers they supervise.
- The study was delimited to SETs, ESOs and CSs that specialise and deal with SE. However, this study shows that SE does not operate in isolation from the general education system. The challenges SE is facing in implementing the curriculum are very linked to the mainstream education. It would have been more representational to involve teachers, ESOs and CSs from the mainstream education to give their views on the CDP and explain the perceived discrimination in CDP.
- The analysis of the quantitative data for this study used none parametric tests such as the Chi-square test of goodness of fit. As is well known in quantitative research, Chi-square tests have a limitation in the interpretation of data. The Chi-square only shows the significant differences and possible relationships between variables. The test does not show the cause and effect or other variables that maybe responsible for a relationship or difference (Best & Kahn 2008, Gaur & Gaur 2009). In this regard, had the study adopted other designs, it would have been possible to bring to literature the

actual causes of poor curriculum implementation particularly for this curriculum implementation.

However, the above limitations and delimitations did not compromise the quality of the results. Against scholars' thinking that limitations are beyond control, researchers should go a step further and make effort to find alternatives to the limitations they encounter in the field. This is why mixed methods study emerges stronger in providing checks to data collected by different instruments. Most of the limitations were covered up by the mixed methods design adopted in the study. Where one instrument failed to provide all answers to research questions, another did.

6.7 CONCLUDING REMARKS

This study is a revelation for the future of SE. It achieved the objectives and answered the research questions. In general, it reflects the lack of SETs involvement in CDP; hence SETs face challenges implementing the revised curriculum for LSENs. Stakeholders responsible for SE felt the lack of involvement was deliberate, further perpetuating negative attitudes toward the profession. While appreciating the content of the curriculum, the lack of vital materials for its implementation and the lack of involvement in general made stakeholders say the curriculum was intended for learners without disabilities. Such kinds of expressions do not reflect well on CDP, a tool that is supposed to be a reflection of an inclusive society. We need an inclusive society and inclusiveness must be seen to work not only through pronouncements of policy documents but in practice. The NCF is very clear on the effort by the MoGE through CDC to utilise adapted technology, adapted syllabuses and other teaching and learning approaches as well as the alternative curriculum but these were not evident in schools at the time of this study even though the curriculum was launched in January 2014. There is still room to improve if we borrow from theory and utilise the cyclic ideas of improving curriculum.

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APPENDICES

APPENDIX A: RESEARCH INSTRUMENTS

(i) PILOTED QUESTIONNAIRE

QUESTIONNAIRE FOR TEACHERS OF SPECIAL EDUCATION

Dear Respondent,

By virtue of your position as a teacher, you have been selected to participate in this study meant to establish how teachers are adapting the newly rolled out curriculum in schools to meet the needs of learners with SEN. You realise that in 2013, the ministry of education, science, vocational training and early education rolled out a new curriculum for schools. Teachers for special education are guided in the new curriculum to adapt it to the needs of learners with disabilities. This study therefore wishes to establish your experiences as teachers in adapting the new curriculum to learners with a SEN. You are therefore requested to be as honest as possible as your contributions play a very significant role in improving the standards of education for learners with SEN. Kindly answer this questionnaire now with the utmost honesty. Be rest assured that the information you will provide will be strictly utilised for the purpose of the study only and not, any other.

Name of the school: **District:**..... **Province:**
.....

Your position in the school: Class teacher [] Senior Teacher [] Deputy Head Teacher []
Head Teacher [] other [write]

Qualification obtained: Certificate in Special Education [] Diploma in Special Education []
Degree in Special Education [] Master's Degree in Special Education [] Not trained in
Special Education []

If you are not trained in special education, write your qualifications:

Years of service in this school: 1-5 years [] 5-10 [] 10-15 [] 15-20 [] 20-25 [] 25 above []

Years of service as a teacher: 1-5 years [] 5-10 [] 10-15 [] 15-20 [] 20-25 [] 25 above []

Nature of your school: Special [] Inclusive [] Unit [] Hospital unit []

1. Do you teach learners with SEN? Yes [] No []
2. What category of learners with SEN do you teach in this school?
 - (a) The Visually Impaired
 - (b) The Hearing Impaired
 - (c) The intellectually challenged
 - (d) The Physically challenged
 - (e) The gifted learners
 - (f) Mixed: state the mixed groups
 - Other (write):
3. How many learners with SEN do you teach in your class?
4. What is the total number of learners in your class including those without disabilities if any? []
5. Of all the learners with SEN you teach, how many are: Severe [] Moderate [] Mild []
6. Are you aware about the new curriculum that was rolled out in schools? Yes [] No []
7. Do you have a copy of the new curriculum framework? Yes [] No []
8. Are you aware that the curriculum for SEN should be adapted from the general curriculum? Yes [] No []
9. Were you involved in coming up with the new curriculum? Yes [] No []
10. At which of the following levels of curriculum development were you involved?
 - (a) Planning
 - (b) Creation
 - (c) Implementation
 - (d) Reflection

11. Explain what your role was at each of the stages

(a) Planning:

.....

(b) Creation:

.....

(c) Implementation:

.....

(d) Reflection:

.....

12. At all the levels, where do you think you were more involved?

13. At all the levels, where do you think you were not very involved?

.....

14. Were you trained in the new curriculum?

15. What do you understand by the concept “curriculum adaptation”?

.....

16. Identify and list ways in which you are adapting the curriculum for your learners with SEN

.....

.....

.....

17. Do you or your school have adapted syllabuses for all subjects for learners with SEN

Yes [] No []

18. Did you receive training on how to adapt the curriculum to suit the needs of your learners with SEN? Yes [] No []

19. Explain the nature of training you received if any in curriculum adaptation for learners with SEN

.....
.....
20. Do you give extra time to learners with SEN to finish their tasks Yes [] No []

21. If yes to question (1), how much time do you give learners with the following disabilities to finish their tasks?

a. Classroom exercises

b. End of term tests

c. Final examinations

22. What do you do when the learners do not finish within the added extra time?

.....
.....
23. Is the extra time given provided for in any guidelines such as the curriculum framework, examinations guidelines or the Disability Act? Yes [] No []

24. If 'No' to the above question, how do you determine how much time should be added for SEN learners to finish their academic tasks?

25. Do learners with SEN perform as well as others without SEN after being given extra time Yes [] No [] Sometimes []

26. What challenges do you face in implementing this adaptation strategy of extra for learners with SEN?

.....
.....
27. How best do you wish this policy of extra time for learners with SEN should be implemented?

.....
.....

- 28.** Do you think there is something that the new curriculum has not addressed for learners with special needs? Yes [] No []
- 29.** If ‘yes’ to the above question, what very important learning aspect has not been addressed in the new curriculum?
- 30.** List very good learning aspects the new curriculum has brought up for learners with SEN?
- (i)
- (ii)
- (iii)
- (iv)
- (v)
- 31.** Do you use computers in teaching your learners with SEN? Yes [] No []
- 32.** How many computers do you have in this school/ unit for learners with SEN?
.....
- 33.** Do learners with disabilities have access to computers for their learning?
.....
- 34.** Do you as a teacher have knowledge of using and teaching computers? Yes [] No []
- 35.** Do computers for learners with SEN have special software that enable them to read and write? Yes [] No []
- 36.** If yes to the above question, what software are available on the computers for learners with vision problems?
- 37.** Do you use audio recorders in your teaching?
- 38.** Do your learners with visual problems have recorders?
- 39.** From the materials below, tick the ones your school has and uses to help learners with SEN learn effectively

- (a) Braillers
- (b) Stylus
- (c) Braille slates
- (d) Hearing aids
- (e) Visual aids
- (f) Magnifiers
- (g) Correction glasses
- (h) Computer with special keyboards
- (i) Computer with talking software
- (j) Recorders

Other

(write):

.....

- 40.** Do you prepare IEPs for your learners with SEN? Yes [] No []
- 41.** Do you have an alternative curriculum for learners who cannot benefit from the general curriculum Yes [] No []
- 42.** If yes to the above question, list the learners that are benefiting from the alternative curriculum
- 43.** What other adaptations do you use in order to implement the new curriculum effectively to learners with SEN?

(ii) **REVISED AND ADMINISTERED QUESTIONNAIRE**

QUESTIONNAIRE FOR TEACHERS OF LEARNERS SPECIAL EDUCATIONAL NEEDS

SECTION A: GENERAL INFORMATION

Name of the school: **District:**..... **Province:**
.....

Your position in the school: Class teacher [] Senior Teacher [] Deputy Head Teacher []
Head Teacher [] other [write]

Qualification: Certificate in Special Education [] Diploma in Special Education [] Degree
in Special Education [] master's Degree in Special Education [] Not trained in Special
Education []

.....

Nature of your school: Special [] Inclusive [] Unit [] Hospital unit []

SECTION B: KNOWLEDGE AND INVOLVEMENT IN DEVELOPMENT OF NEW CURRICULUM

1. Are you aware about the new curriculum that was rolled out in schools? Yes [] No []
2. Do you have a copy of the new curriculum framework? Yes [] No []
3. Are you aware that the curriculum for SEN should be adapted from the general curriculum? Yes [] No []
4. Were you involved in coming up with the new curriculum? Yes [] No []

If your answer to question '4' is '**YES**', briefly explain how you were involved in the development of the new curriculum?

.....

Kindly ‘**tick**’ in the boxes below to rate the level of your involvement in development of the new curriculum

STAGE	Very much	Much	not much	Not involved
Planning				
Creation				
Implementation				
Reflection				

SECTION C: CURRICULUM ADAPTATION

5. Were you trained in the new curriculum? YES [] NO [] Somehow []
6. What do you understand by the concept “curriculum adaptation”?
.....
Do you have an alternative curriculum for learners who cannot benefit from the general curriculum Yes [] No []
7. Have you developed an adapted curriculum from main curriculum for learners with SEN? Yes [] No []
8. Do you or your school have adapted syllabuses for all subjects for learners with SEN? Yes [] No []
9. Did you receive training on how to adapt the curriculum to suit the needs of your learners with SEN? Yes [] No []
10. Explain the nature of training you received if any in curriculum adaptation for learners with SEN

.....
.....

List ways in which you are adapting the curriculum for your learners with SEN

.....
.....
.....

List very good learning aspects the new curriculum has brought up for learners with SEN

- (vi)
- (vii)
- (viii)

SECTION D: MATERIAL, STRATEGIES AND CHALLENGES FOR CURRICULUM ADAPTATION

11. From the table below tick if your school has the following materials for adapting of the curriculum.

S/N	Adaptive material	YES	NO
<i>a</i>	Braille		
<i>b</i>	Stylus		
<i>c</i>	Braille slates		
<i>d</i>	Hearing aids		
<i>e</i>	Visual aids		
<i>f</i>	Magnifiers		
<i>g</i>	Sight Correction glasses		
<i>h</i>	Computer with special keyboards		
<i>i</i>	Computer with talking software		
<i>j</i>	Recorders		
<i>k</i>	Special seats for physically challenged		
<i>l</i>	Special writing equipment for physically challenged		
<i>m</i>	Posture holders		

Other (write):

In the table below, kindly tick ‘Yes’, ‘No’, “Sometimes“, or “not sure” if you use any of the following strategies to adapt the curriculum to meet the learning needs of LSENs

	Curriculum adaptation strategy	YES	NO	SOMETIMES	Not Sure
<i>A</i>	Giving extra time during exams				
<i>B</i>	Giving extra time during class tasks				
<i>C</i>	Giving different assessment tasks				
<i>D</i>	Reducing the number of tasks				
<i>E</i>	Replacing tasks/content				
<i>F</i>	Omitting tasks				
<i>G</i>	I use Individualised teaching				
<i>H</i>	I prepare an IEP for each learner with SEN				
<i>I</i>	Use of computers				
<i>J</i>	I use recorders				

12. What other adaptations do you use in order to implement the new curriculum effectively to learners with SEN?

.....

13. How best do you wish special education teachers can be helped to adapt the new curriculum to meet the learning needs of learners with SEN?

.....

.....

14. Do you as a teacher have knowledge of using and teaching computers? Yes [☐] No [☐]

15. What challenges do you face in adapting the curriculum to meet the learning needs of learners with SEN?

.....
.....

THANK YOU VERY MUCH FOR ANSWERING THE QUESTIONS IN THIS QUESTIONNAIRE!!

(iii) INTERVIEW GUIDE FOR CURRICULUM SPECIALISTS RESPONSIBLE FOR SPECIAL EDUCATION AT CURRICULUM DEVELOPMENT CENTRE

INTERVIEW GUIDE FOR CURRICULUM SPECIALISTS RESPONSIBLE FOR SPECIAL EDUCATION AT CURRICULUM DEVELOPMENT CENTRE

1. Kindly provide the background to the curriculum review that gave birth to the current curriculum, i.e. what prompted the change, what deficiencies were observed, stakeholder involvement etc
2. How does the new curriculum benefit LSENs compared to the old curriculum?
3. The 2013 curriculum framework states that there would be an adapted curriculum and adapted technology for SEN learners in special schools and an alternative curriculum for intellectually challenged learners and severe cases. What is meant by an adapted curriculum, adapted technology and alternative curriculum? Are the support documents such as the adapted curriculum and alternative curriculum for learners with SEN in place? If not why?
4. What preparatory mechanisms were put in place for teachers before implementation of the new curriculum? Trainings, how many times, in what?
5. What challenges does CDC face when developing and implementing a new curriculum for teachers of learners with SEN?
6. What are your recommendations for future curriculum review?

(iv) PILOTED INTERVIEW GUIDE

INTERVIEW GUIDE FOR CURRICULUM SPECIALISTS RESPONSIBLE FOR SPECIAL EDUCATION AT CURRICULUM DEVELOPMENT CENTRE

1. There was a change in the curriculum in 2013. In relation to special education, what issues really prompted the change?
2. What deficiencies were observed in the previous curriculum that prompted change to the current curriculum?

3. What have you included in the curriculum that was not there in the previous curriculum which is more beneficial to learners with SEN?
4. Would you kindly state the stages that this curriculum change went through and explain how teachers were involved at each stage. Or at what stages were teachers involved in the curriculum change and what were their roles at those stages identified?
5. There has been stakeholder outcry that they were not involved in the curriculum development process. Which other stakeholders did you involve in the curriculum change and what were their roles?
6. The curriculum framework states that there would be an adapted curriculum and adapted technology for SEN learners in special schools and an alternative curriculum for intellectually challenged learners and severe cases. What is meant by an adapted curriculum, adapted technology and alternative curriculum? Which severe disabilities are supposed to benefit from an alternative curriculum?
7. The curriculum framework states there would be an alternative curriculum for the intellectually challenged and an adapted curriculum for the severe disabilities. Are these documents ready or were they ready by the time the new curriculum was rolled out?
8. The new curriculum was rolled out before the alternative curriculum could be developed. What are the reasons for such a thing?
9. Without an alternative curriculum and adapted curriculum, how are teachers expected to implement the new curriculum?
10. How does the new curriculum affect learners with SEN positively and negatively?
11. What preparatory mechanisms were put in place for teachers before implementation of the new curriculum? Trainings, how many times, in what?
12. What challenges does CDC face when developing a new curriculum for teachers with special education?
13. If there are gaps in the process, what are your plans to seal those gaps?

**(v) REVISED AND ADMINISTERED INTERVIEW GUIDE FOR DISTRICT
EDUCATION STANDARD OFFICERS**

**INTERVIEW GUIDE FOR STANDARDS AND EVALUATION OFFICERS
RESPONSIBLE FOR SPECIAL EDUCATION**

1. Kindly help us understand why there was a change in the curriculum.
2. What was your role in the curriculum development process? At what stages were you mainly involved and how were you involved?
3. What was the role of teachers in curriculum change?
4. What trainings were done to prepare teachers for the change?
5. How do you think the change has affected teachers for learners with SEN?
6. How has the change affected learners with SEN?
7. What challenges do you face implementing the new curriculum or what reports have you obtained from teachers in the implementation of the new curriculum?
8. When you review the whole process of curriculum change that took place, do you think the change was meaningful for learners with SEN? If not why, give reasons. If yes why, give reasons.
9. What are your recommendations for future curriculum review?

(vi) OBSERVATION CHECKLIST FOR TEACHERS

Observer will look for the following attributes in teacher observations, the teaching files and the IEP. The main idea is to see how teachers are adapting the curriculum in meeting the needs of learners with SEN.

Observation Details

School: **District:** **Province:**

Qualifications:

Class being taught:

Category of Disability being taught:

Date:

S/N	CATEGORY	Adaptive feature	Yes (tick)	No (tick)
	Teaching	(i) Teacher brings learners with disabilities to listening positions		
		(ii) Teacher helps remove obstacles		
		(iii) Teacher uses Sign language		
		(iv) Teacher uses braille		
		(v) Teacher practices individual attention		
		(vi) extra time given to learners to finish tasks		
	Teaching Resources	(i) Teacher uses computers		
		(ii) Learners use computers and other technologies to learn		
		(iii) Learners have recorders		
		(iv) Learners use braille and styluses		
		(v) Teacher has adapted syllabus		
		(vi) Teacher has adapted teaching plan		
	Teaching	(i) Teacher evaluates weaknesses and strength of learners		
		(ii) Teacher identifies difficulties encountered in teaching		
	The IEP	(i) Teacher prepares an IEP		
		(ii) IEP shows child's profile data		
		(iii) IEP has short-term achievable objectives		
		(iv) IEP shows strategies to address targets		
		(v) IEP shows special provisions to support learning		
		(vi) IEP shows date for review		
		(vii) IEP shows team members		
	Adapted syllabus	(i) Teacher has a published adapted syllabus		
		(ii) Teacher has made up own adapted syllabus		
		(iii) Adapted syllabus has recommended methods		
		(iv) Adapted syllabus has recommended special teaching aids		
	Alternative Curriculum	(i) Teacher has an alternative curriculum		
		(ii) AC has lesser learning outcomes		
		(iii) AC emphasises skills		

(v) POST LESSON DISCUSSION GUIDE

This guide was used on teachers that were observed in teaching. The questions centred on the lesson taught. The instrument also applied to teachers that gave excuses against being observed but agreed to discuss their experiences of the revised curriculum in teaching in teaching their respective learners with SEN. It must be noted that the questions were situation

depending on each teacher's experiences and subject specialisation as well as the type of disability they taught hence discussions may have been varied from teacher to teacher.

1. Describe the characteristics of your class of learners with SEN
2. Would you describe your experiences/ challenges of implementing the revised curriculum to learners with SEN in your subject as taught in that class
3. What do you think are the challenges you faced when teaching?
4. Do you have guidelines that help you to teach concepts you find difficult to teach
5. What strategies do you use to teach these learners in the absence of the guideline
6. Do you have an IEP that you can give me so that I use it for my analysis

APPENDIX B: RESEARCH SUPPORT DOCUMENTS

(i) CONSENT FORM

CONSENT TO PARTICIPATE IN THIS STUDY (Return slip)

I, _____ (participant name), confirm that the person asking my consent to take part in this research entitled “*Curriculum Implementation for LSEs: The Case of Selected Inclusive and Special Schools in Zambia*” has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the interview data/post teaching discussion.

I have received a signed copy of the informed consent agreement.

Participant Name & Surname (please print) _____

Participant Signature Date

Researcher's Name & Surname (please print) _____

Researcher's signature Date

(ii) LETTER TO QUESTIONNAIRE RESPONDENTS

Dear Respondent

This questionnaire forms part of my doctoral research entitled: “*Curriculum Implementation for LSENs: A Case of Selected Special and Inclusive Schools in Zambia*” for the degree of Doctor of Education in Curriculum Studies at the University of South Africa. You have been selected by a random sampling strategy from the population of 100. Hence, I invite you to take part in this survey.

The aim of this study is to establish how SE teachers are implementing the new curriculum in order to meet the learning needs of LSENs in Zambia and come up with modalities of developing inclusive curriculum implementation guidelines.

You are kindly requested to complete this survey questionnaire, comprising four (4) sections as honestly and frankly as possible and according to your personal views and experience. No foreseeable risks are associated with the completion of the questionnaire which is for research purposes only. The questionnaire will take approximately 15 minutes to complete.

You are not required to indicate your name and your anonymity will be ensured; however, indication of the name of your school, district, province, specialisation, qualification, your position in the school, gender, institution where you were trained and years of service will contribute to a more comprehensive analysis. All information obtained from this questionnaire will be used for research purposes only and will remain confidential. Your participation in this survey is voluntary and you have the right to omit any question if so desired, or to withdraw from answering this survey without penalty at any stage. After the completion of the study, an electronic summary of the findings of the research will be made available to you on request.

Permission to undertake this survey has been granted by the University of South Africa and the Ethics Committee of the College of Education, UNISA. If you have any research-related enquiries, they can be addressed directly to me or my supervisor. My contact details are: 0968385242/ 0955472770 email: muzatakenneth@gmail.com or 51984849@mylife.unisa.ac.za and my supervisors can be reached at Tel +27824313302 for Professor Franscina Mahlo, Department of Inclusive Education and at Tel: +27 12 429 4478

for Professor Pinkie Mabunda Department of Teacher Education, College of Education, UNISA, e-mails: mahlofd@unisa.ac.za and mabunpl@unisa.ac.za respectively.

By completing the questionnaire, you imply that you have agreed to participate in this research.

Please return the completed questionnaire to me in person before I leave this district. I will be in this district for five working days.

(iii) PARTICIPANT INFORMATION SHEET

21.11.2016

Title: *Curriculum Implementation for LSENs: A case of selected special and inclusive schools in Zambia*

Dear Prospective Participant

My name is Kenneth Kapalu Muzata and I am doing research with Franscina Mahlo and Pinkie Mabunda, Professors in the Department of Inclusive education and Teacher Education respectively toward a Doctor of Philosophy of Education in the subject Curriculum Studies at the University of South Africa. We are inviting you to participate in a study entitled, “*Curriculum Implementation for Learners with Special Educational Needs: A case of selected special and inclusive schools in Zambia*”. We kindly edge you to participate in this very important study because you are a key stakeholder in school curriculum. For your privacy, we will not use your names and other important personal particulars in the questionnaires, interviews and the report. However, your participation is voluntary and you may withdraw from the study at any stage you feel like without any penalty.

WHAT IS THE PURPOSE OF THE STUDY?

I am conducting this research to find out how teachers teaching LSENs are implementing the new curriculum, what strategies are being used to implement the new curriculum and what challenges teachers are facing during the implementation process. Are teachers’ experiences in the curriculum implementation related to being involved in coming up with the curriculum? These are crucial issues this study wishes to establish and only you can have the cardinal answers required. Your participation in this study will distinguish you from a

nonprofessional. Professionals take part in such studies. They transform the education system and have an impact on major policy shifts. We will acknowledge you in the research report as teachers that made a huge contribution to literature and generally to the scholarly world.

WHY AM I BEING INVITED TO PARTICIPATE?

We chose you to be a participant in this study because you are a very significant person who is directly involved in implementing the curriculum to particularly LSENs. We know you have the right information about the implementation process of the curriculum. We do not however know whether you as teachers for this category of learners were directly involved in coming up with the curriculum or you were simply told to implement it. If you were simply told to implement it without your involvement in coming up with it, what are your experiences and challenges? We know your involvement through this study can help curriculum development initiators develop consultative strategies to involve teachers in curriculum development.

We are aware about you as a teacher for LSENs at this school because we know the school and your DEBS and head teacher made us aware that you are the right person to help us with information on this study. You are not the only one involved in this study. The study will capture 100 SE teachers from special and inclusive schools around Zambia. In this district, we are targeting 20 teachers and you are one of them. You therefore need to feel free to participate because your views will add value to the rest of the views we intend to collect from the 100 teachers we have targeted.

THE NATURE OF YOUR PARTICIPATION IN THE STUDY

The study involves questionnaires, observation and post teaching discussion. Questionnaires have both open and close ended questions. Some questions will require you to explain a few things while other questions will require you to simply tick a response you consider suitable. The observation is simply meant to have a feel of how you teach LSENs and thereafter, we discuss your experiences of teaching these learners. The questionnaire will take you less than or equal to 15 minutes to complete while the observation will be dependent on your teaching but the post teaching discussion will be only about 15 minutes.

WITHDRAWAL FROM THE STUDY

We encourage you to complete the study because you are a key person who has information on the subject being investigated. We can assure you that this study is risk free and there is no need to withdraw from it because you equally will one day carry out such studies and will need Respondents to improve our education system practices. You will not need to write your names and other particulars on the questionnaires and so no one will even know you participated in the study. Though the post teaching discussion will be audio recorded, we will not even use your names at all. Unless you have very serious commitments, it would not be ideal to withdraw from the study. Let's work together to improve our education system through research. However, your participation is voluntary and you may withdraw from the study at any stage you feel like without any penalty.

WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

It is an ethical responsibility of every researcher to adhere to confidentiality requirements for the research participants. The information you will provide will strictly be used for academic purposes. Your names will not be reflected in the research report, not even on the questionnaires and interviews. This study will only be conducted by me under the supervision of Professors Franscina Mahlo and Pinkie Mabunda. No one else will have access to the data I will collect. If I get stuck with the data, I will seek further clarification from you as my Respondent and no one else. Since your names will not be recorded anywhere on the research tools, no one will know you are the one who answered in a certain manner. Your answers and even places where I am collecting this data are accorded pseudonyms, all in the interest of protecting our respondents' participation in this study and indeed in future studies. I will do the transcribing of the audio recorded interviews and analysis of the questionnaire and other data. As a PhD student, I am obliged to do all this myself to enhance my research skills. Therefore, there is no one else who will have access to the recordings and other data I will collect from you. In any case, for this study particularly, you need not to fear because it involves teaching and how best we can improve it. There are no risks anticipated for taking part in such a study, if any, it could be personal. The study is educational.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

All data collected through hard copies will be transferred for analysis and storage in software tools such as the SPSS and NVIVO qualitative data analysis software. The software is not

easily operated by anyone who is not involved in scientific research and so to have access to them by unknown people is not possible. Further, my computers are password lock tight that no one can access my data without my consent. After all data is entered into the necessary software, hard copies will be shredded within the period of five years of my completion of my PhD programme. During the study period, the hard copies will be well stored in my office lock ward lops for reference during analysis. The audio recorded interviews will be stored on CDs with passwords only known by me to ensure security. My computer is also well secured with password to be only accessed by me and not any other person. All these materials will be destroyed and deleted from the computer once the report for my study is compiled and approved by UNISA.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

This study does not attract any payment. I am a student who is self-sponsored on the PhD programme and I am facing difficulties even to find money to pay for my fees. I will only appreciate that your participation in this study is a self-sacrifice emanating from your professional position as a teacher/ education standard officer. Any costs you will incur by participating in this study will be highly appreciated. I have strong belief that your participation in this study is a service to the nation and the academic world. The only payment you should appreciate is your value as a professional having been considered to be part of this very important study.

HAS THE STUDY RECEIVED ETHICS APPROVAL

This study has received written approval from the Research Ethics Review Committee of the University of South Africa, (REC Unisa). A copy of the approval letter is hereby attached.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings, please contact Kenneth Kapalu Muzata on cell phone number 0979 38 1664 OR 0955472770 or send me an email on muzatakenneth@gmail.com. The findings will be accessible any time after publication of the report. Please do not use home telephone numbers. Departmental and/or mobile phone numbers are acceptable.

Should you require any further information or want to contact the researcher about any aspect of this study, please contact my supervisor, Professor Pinkie Mabunda, on mabunpl@unisa.ac.za, phone number +27 12 429 4478 or my co supervisor Professor Franscina Mahlo on mahlofd@unisa.ac.za, phone number, +27824313302.

Should you have concerns about the way in which the research has been conducted, you may contact my supervisor Professor Pinkie Mabunda, on mabunpl@unisa.ac.za, phone number +27 12 429 4478 or my co supervisor Professor Franscina Mahlo on mahlofd@unisa.ac.za, phone number, +27824313302.

Thank you for taking time to read this information sheet and for agreeing to participate in this study.

Thankyou.



Kenneth Kapalu Muzata

(iv) EVALUATION OF THE INTERVIEW CONDUCTED

Dear Respondent,

Thank you very much for having participated in the study entitled “*Curriculum Implementation for Learners with Special Educational Needs: A case of selected inclusive and special schools in Zambia*”. Kindly give me feedback on the way I conducted the interview with you during my data collection. Just tick what you think is the correct response for you. Feel free to say your mind as this will help me improve my techniques of interacting with my respondents in future!

NATURE	Yes	No
Questions were clear		
Questions were difficult		
Questions were frustrating		
Questions were annoying		
Enough time was given		
Questions were too many		
I was not comfortable with the recording		

Interviewer		
Interviewer was too fast		
Interviewer was intimidating in voice projection		
Interviewer used difficult words		
I didn't trust the interviewer		

Write any other observations you have about the interview not listed above:

.....

.....

.....

.....

.....

.....

APPENDIX C: PERMISSIONS AND INTRODUCTIONS

(i) ETHICAL CLEARANCE



COLLEGE OF EDUCATION RESEARCH ETHICS REVIEW COMMITTEE

19 October 2016

Ref : 2016/10/19/51984849/29/MC
Student : Mr KK Muzata
Student Number : 51984849

Dear Mr Muzata

Decision: Approved

Researcher: Mr KK Muzata
Tel: +0979381664
Email: 51984849@mylife.unisa.ac.za

Supervisor: Prof. FD Mahlo
College of Education
Department of Inclusive Education
Tel: +2782 431 3302
Email: mahlofd@unisa.ac.za

Co-supervisor: Prof. PL Mabunda
College of Education
Department of Curriculum and Instructional Studies
Tel: +2712 429 4478
Email: mabunpl@unisa.ac.za

Proposal: Curriculum implementation for learners with special education needs: The case of selected Inclusive and Special Schools in Zambia

Qualification: D Ed in Curriculum Studies

Thank you for the application for research ethics clearance by the College of Education Research Ethics Review Committee for the above mentioned research. Final approval is granted for the duration of the research.

The application was reviewed in compliance with the Unisa Policy on Research Ethics by the College of Education Research Ethics Review Committee on 19 October 2016.

The proposed research may now commence with the proviso that:

- 1) The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*
- 2) Any adverse circumstance arising in the undertaking of the research project that is*



University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
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www.unisa.ac.za

relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the College of Education Ethics Review Committee. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.

- 3) The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.

Note:

The reference number **2016/10/19/51984849/29/MC** should be clearly indicated on all forms of communication [e.g. Webmail, E-mail messages, letters] with the intended research participants, as well as with the College of Education RERC.

Kind regards,



Dr M Claassens

CHAIRPERSON: CEDU RERC
mcdtc@netactive.co.za



Prof VI McKay
EXECUTIVE DEAN



University of South Africa
Pretorius Street, Muckleneuk, Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

(ii) INTRODUCTORY LETTER FROM RESEARCHER'S PLACE OF WORK



THE UNIVERSITY OF ZAMBIA
SCHOOL OF EDUCATION
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY, SOCIOLOGY AND
SPECIAL EDUCATION

23rd November, 2016.

TO WHOM IT MAY CONCERN

The bearer of this letter Mr. Kenneth Kapalu Muzata is lecturer in the Department of Educational Psychology, Sociology and Special Education. He lectures in Special Education courses. Mr. Muzata is a Doctoral Student at the University of South Africa (UNISA) and is currently collecting data for his study titled "*Curriculum Implementation for Learners with Special Educational Needs: A case of selected inclusive and special schools in Zambia.*" This is an important study in the field of Special Education whose findings might provide useful information to educational practitioners and policy makers.

Your assistance to this study in terms of access to information and permission to interact with informants in your institution will be appreciated.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Kalisto Kalimaposo'.

Kalisto Kalimaposo, PhD
Head - EPSSE

**(iii) PERMISSION BY PERMENENT SECRETARY TO CONDUCT
RESEARCH**

*All communications should be addressed to:
The Permanent Secretary, Ministry of General Education
Not to any individual by name*

Telephone: 250855/251315/251283
251293/211318/251291
251003/251319



REPUBLIC OF ZAMBIA

MINISTRY OF GENERAL EDUCATION

In reply please quote

No.

MOGE/101/3/6

P. O. BOX 50093
LUSAKA

10th January, 2017

Kenneth Kapalu Muzata
University of Zambia
School of Education
Department of Education Psychology, Sociology and Special Education
P.O.BOX 32379
LUSAKA.

RE: REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY

Reference is made to your minute dated 13th December, 2016 through which you requested the Ministry of General Education to consider granting you permission to conduct a research study in selected special and inclusive schools in Southern, North Western, Western and Lusaka Provinces.

I am pleased to inform you that the Ministry has granted permission for you to conduct your research in the selected special and inclusive schools in the selected Provinces.

Further, by copy of this letter, the Provincial Education Officers (PEOs) Southern, North Western, Western and Lusaka Provinces is here by informed about this authority to allow you conduct your research in selected special and inclusive schools in the provinces.

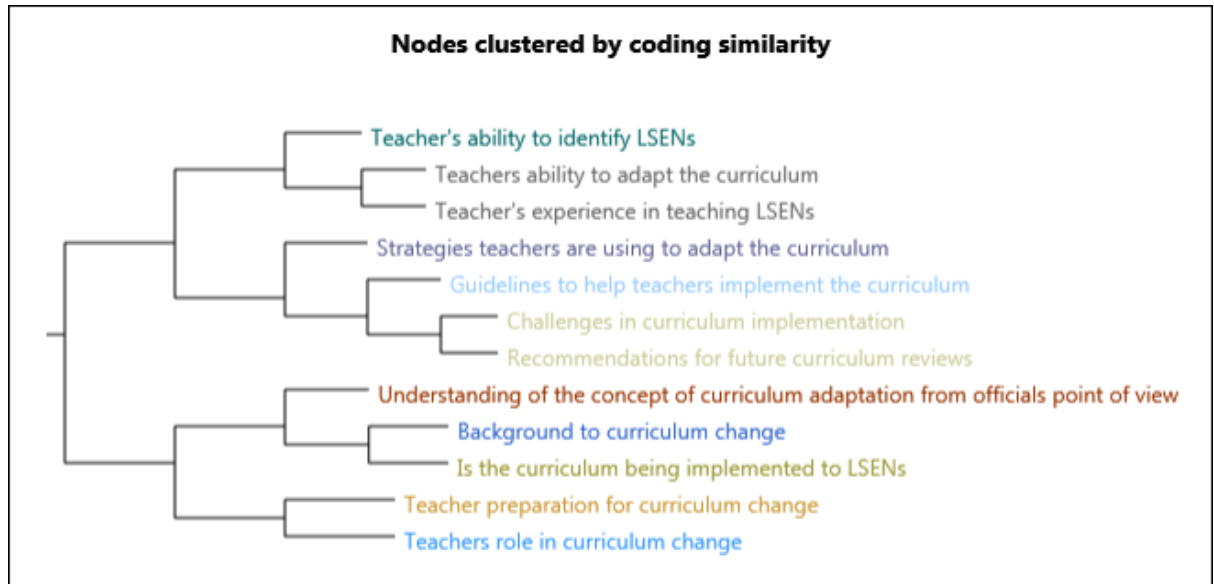
Thank you for showing interest in our Ministry.


Fredrick Mwila
Acting Director-HRA
For/Permanent Secretary
MINISTRY OF GENERAL EDUCATION

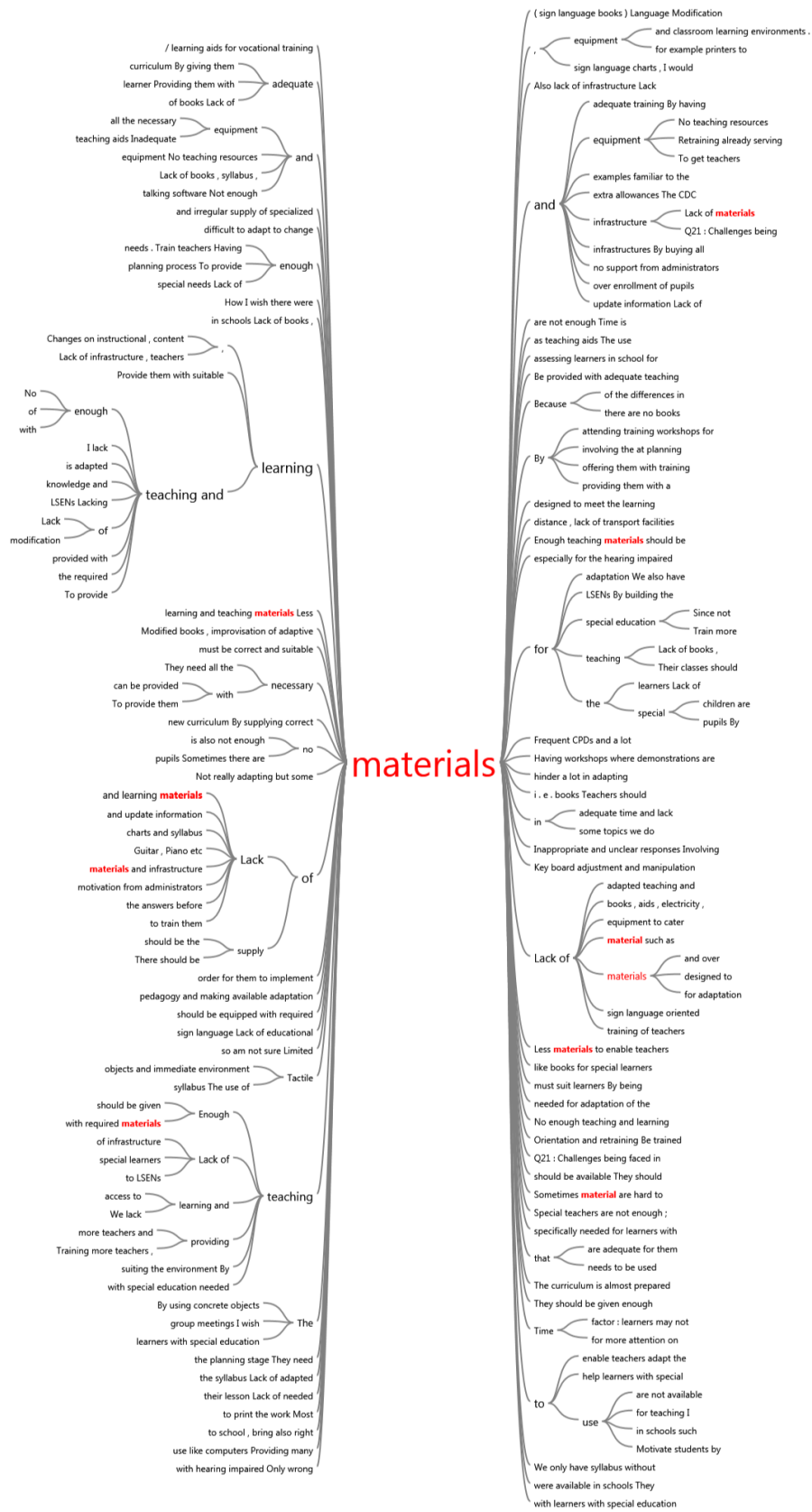
C.C: The Provincial Education Officer, Lusaka Province, LUSAKA
C.C: The Provincial Education Officer, Southern Province, CHOMA
C.C: The Provincial Education Officer, North Western Province, SOLWEZI
C.C: The Provincial Education Officer, Western Province, MONGU

APPENDIX D: EXTRACTS FROM ANALYSED DATA FROM NVIVO

(i) Nvivo Pro Verison 10 Clustered Analysis of Coding Similarity

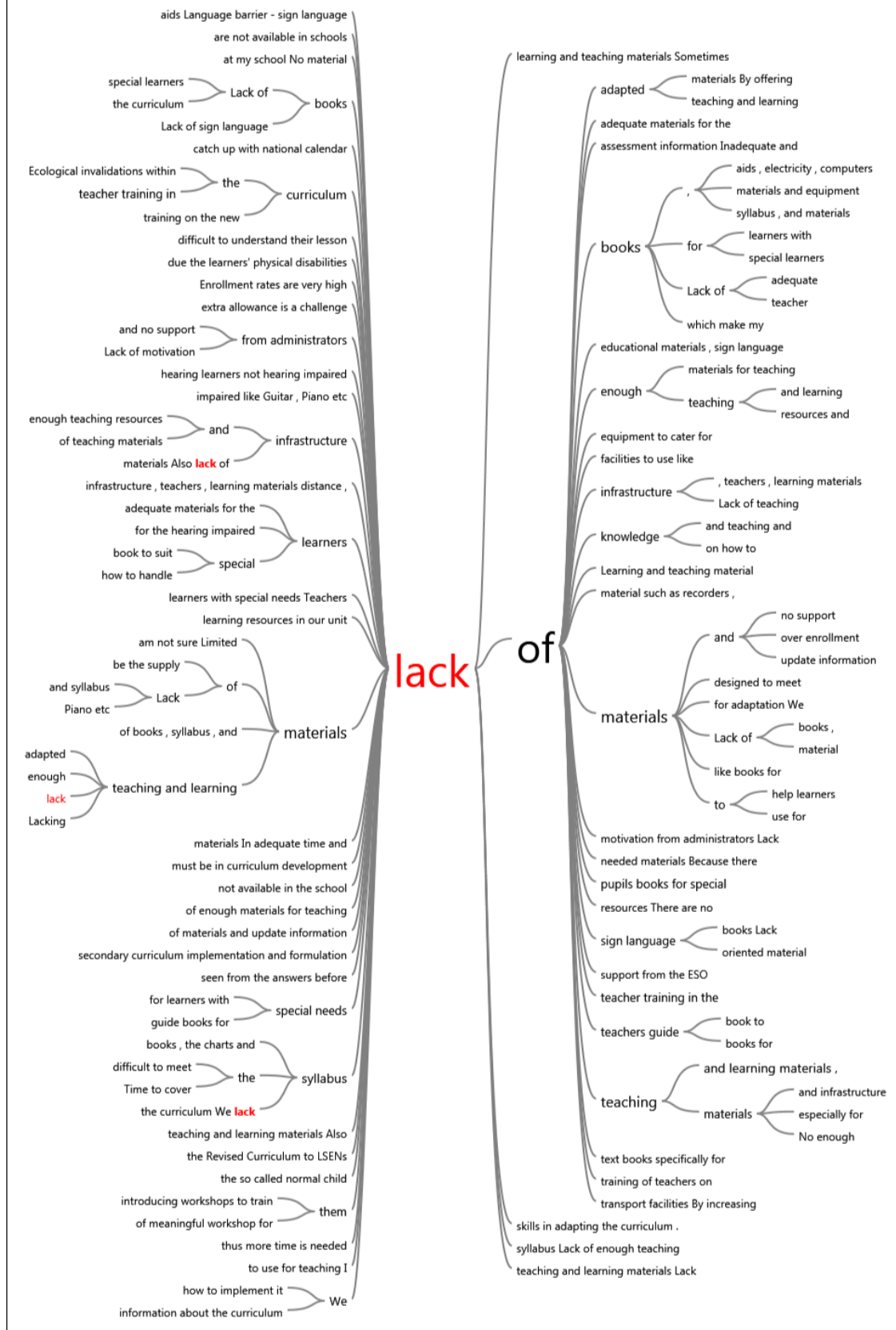


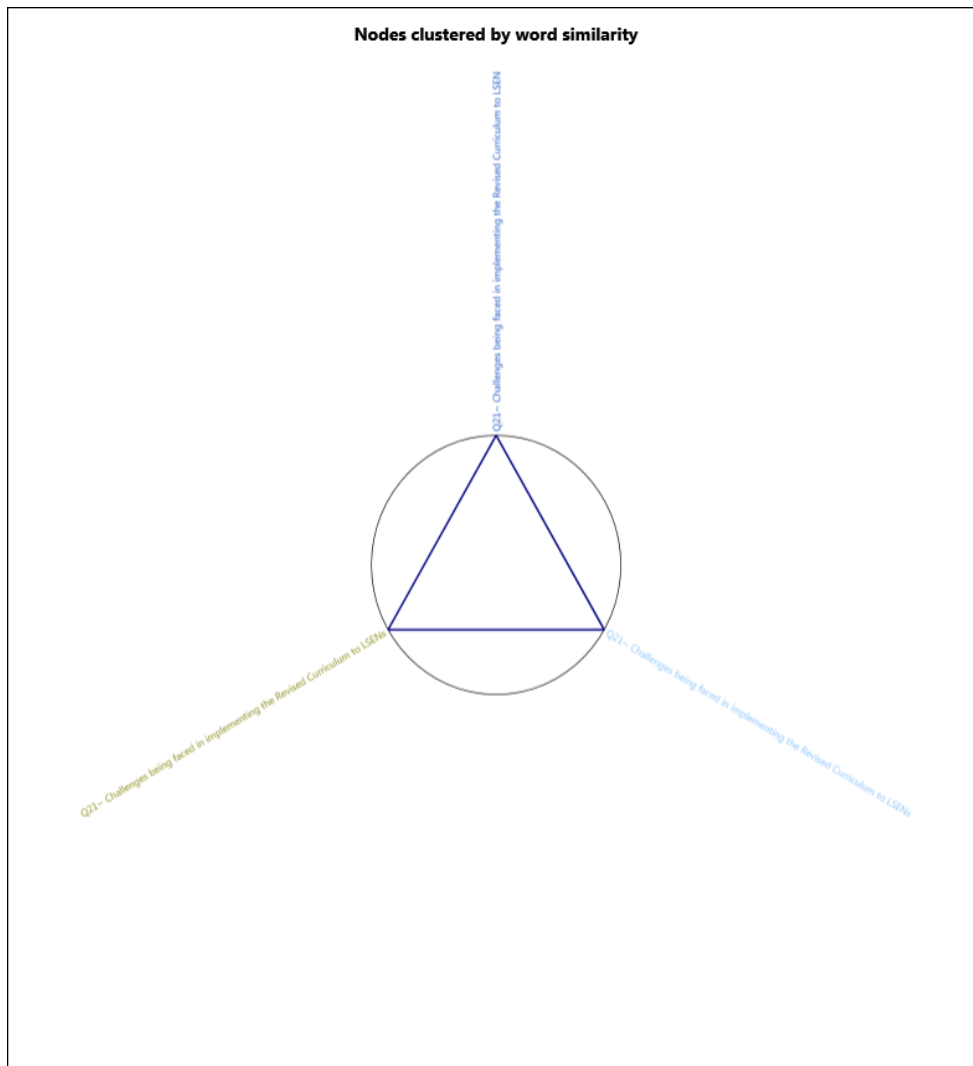
(ii) Nvivo Pro Version 10 Text Search Query of Materials as Challenges



(iv)Nvivo Pro Version 10 Text Query of lacking materials for curriculum implementation

Text Search Query - Results Preview





Node A	Node B	Pearson correlation coefficient	Diagram Summary
Nodes\North Western Province\Q21~ Challenges	Nodes\Lusaka Province Responses to Questionnia	0.740004	
Nodes\Sourthen Province\Q21~ Challenges being	Nodes\North Western Province\Q21~ Challenges	0.723657	
Nodes\Sourthen Province\Q21~ Challenges being	Nodes\Lusaka Province Responses to Questionnia	0.705836	

APPENDICE E: LANGUAGE EDITING CERTIFICATE



Blue Diamonds Professional Services (Pty) Ltd

Enhancing your brilliance

Tel: 031 916 1420

Fax: 086 627 7756 Email: jaybee@telkomsa.net

Website: www.jaybe9.wix.com/bluediamondsed

9 November 2017

Declaration of professional edit

**CURRICULUM IMPLEMENTATION FOR LEARNERS WITH SPECIAL EDUCATION NEEDS: THE CASE OF
SELECTED INCLUSIVE AND SPECIAL SCHOOLS IN ZAMBIA**

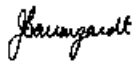
by

Kenneth Kapalu Muzata

I declare that I have edited and proofread this thesis. My involvement was restricted to language usage and spelling, completeness and consistency, referencing style and formatting of headings, captions and Tables of Contents. I did no structural re-writing of the content.

I am qualified to have done such editing, being in possession of a Bachelor's degree with a major in English, having taught English to matriculation, and having a Certificate in Copy Editing from the University of Cape Town. I have edited more than 100 Masters and Doctoral theses, as well as articles, books and reports.

Sincerely,



Dr Jacqueline Baumgardt
Member, Professional Editors Guild

Blue Diamonds Professional Services (Pty) Ltd (Registration Number 2014/092365/07)
Sole Director: J Baumgardt